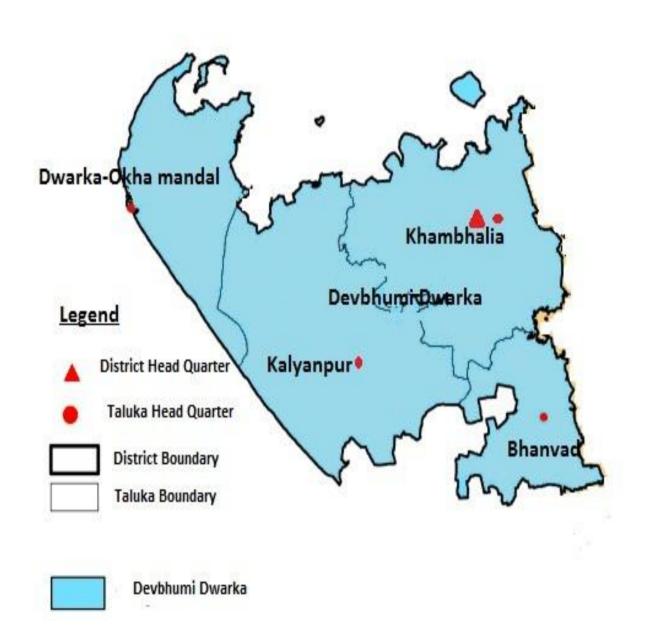
# **District Disaster Management Plan**

## **DEVBHUMI DWARKA**





COLLECTOR OFFICE DEVBHUMI DWARKA 2021



Website: http://devbhumidwarka.gujarat.gov.in

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# Chapter 1 INTRODUCTION



### Chapter: 1 Introduction

In recent years earthquakes, floods, tropical storms, droughts and other calamites have killed millions of people, inflicted injury, disease and caused homelessness and misery to around one billion others in the world. These have caused damage to infrastructure worth millions of rupees. Disaster destroys decades of human effort and investments, thereby, placing new demands on society for reconstruction and rehabilitation. Disaster management thus requires a multidisciplinary and proactive approach. The community, civil society organizations, media and the proverbial man on the street, everyone has to play a role in case such exigency occurs. The various prevention and mitigation measures outlined below are aimed at building up capabilities as also how to deal with disasters.

### **1.1 OBJECTIVE**

The objective of a District Disaster Management Plan (DDMP) is to localize a Disaster and contain its effect to the greatest extent so as to minimize its impact on life, environment and property. Response to any disaster, in the absence of a well-defined plan, would be arbitrary, leading to overemphasis of some actions and absence of other critical actions. A formal plan for Managing Disaster is therefore necessary. This Disaster management plan has a strong preparedness focus which aims at reducing our vulnerability to disasters and at the same time, it includes a plan of action/response mechanism for dealing with earthquakes, floods, cyclones, epidemics, industrial and chemical accidents, road accidents and fires.

This document provides basic information required for the management of disasters in Devbhumi Dwarka District to:

- Define the Risks and Vulnerabilities of citizens of the district,
- Identify private and public sector stakeholders with prime and supporting responsibilities to reduce or negate these vulnerabilities
- Define actions to be taken to avoid or mitigate the impacts of possible disasters in the district.

Subsidiary plans are developed at the:

- Village Disaster Management Plan (VDMP) at village level,
- Taluka Disaster Management Plan (TDMP) at taluka level,
- City Disaster Management Plan (CDMP) at Nagarpalika/Municipality Level,
- Off-site Emergency Management Plan for major industrial sites located in the district

Standard Operating Procedures (SOPs) of all Line Departments detailing how specific disaster response actions will be accomplished.Developing and maintaining SOPs are the responsibility of parties with designated prime or supporting tasks assigned by this plan.Keeping in view all the possible aspects of the aforesaid problem in mind and to keep the Administration prepared in all possible ways to respond properly to various Disaster situations with minimum delay, possible Disaster situations have been identified and the component plans have also been identified & mentioned in detail in this document.

Human play roles directly or indirectly behind the occurance of disaster, but largely disasters can be classified in follworing two categories:

## 1. Natural Calamities

- \* Floods \* Earthquake \* Cyclone \* Fire
- \* Biological Disaster or Epidemic of Human/livestock/crops

2. Man Made Calamities	
* Industrial Disaster	* Radiological Disaster
* Accidents	* Railways
* Road	* Air
* Building Collapse	* Bomb Blast (Terrorist Activities)
* Stampede at crowded Places	* Food Poisoning

The mode, degree and extent of response to fight out any Disaster depend upon the nature, degree and extent of Disaster, but some points are common to all kinds of situations. For example, first and foremost, appropriate and adequate steps for preventing the disaster should be undertaken. Secondly, preparedness is required to contain the damages and casualties resulting from the Disaster. Thirdly, steps for rehabilitation and restoration of community life within a reasonable time should be focused on.

Hence, some necessary and common steps are as below:

1. Establishment of Central Control Rooms and capacity enhancement of Emergency Operation Centers.

2. District Disaster Management Committee to meet post early warning or immediately post disaster occurrence.

- 3. A general line of action and some special duties to various officers and departments will have to be assigned, keeping in mind a timeline for finishing specific tasks.
- 4. Voluntary Organizations may have to be involved and their role will have to be clearly specified and coordinated.
- 5. Media may have to be briefed to suppress all kinds of rumors.
- 6. Information regarding resource inventory of Health Services, Transport Services, Evacuation & Rehabilitation Centers and Food etc. needs to be kept handy so that resources can be deployed where required.
- 7. Consistent follow-up of relief operations and constant reporting of pre and post disaster work.

Broad guidelines have been given in the following pages and "Standard Procedure" has been formulated which is to be adhered to by all concerned. Once the Disaster take place and the authorities are informed of the same, they will take the necessary action with the help of the individual Disaster management plans prepared for the respective Disaster/situations.

The main objectives of various preparedness measures are:

- i) Minimize the loss of human lives.
- ii) Minimize the loss of livestock.
- iii) Minimize the loss to property and infrastructure.
- iv) Minimize ill effects on the health of the affected population.
- v) Bringing the human activities in the locality to normal soon after.

To achieve the above objectives, different tasks have to be performed by Government Departments and other agencies before, during and after the Disaster. Each Department's role and responsibilities have to be clearly identified and an action plan needs to be drawn up by each department. For close cooperation between the various Department and Agencies, close coordination is required between the Collector at the District Headquarters and Prant Officers (SDM) at the Sub-division or taluka level. The responsibility to manage any type of Disaster in the district rests with the **District Disaster Management Committee** headed by the Collector Devbhumi Dwarka, who may, depending upon the gravity of the situation, seek the help of **State Disaster Management Committee** and the **National Disaster Management Committee**. This tiered and hierarchical structure ensures that the best possible response is accorded to any disaster situation, depending upon the severity of damage. For operational expediency, the level of Disasters have been categorized and classified as under:

## Level of Disasters

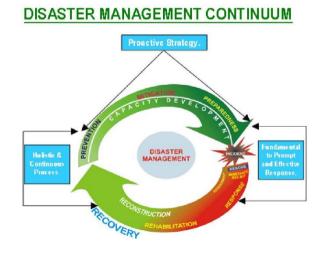
L concept has been developed to define different levels of disasters in order to facilitate the responses and assistances to States and Districts.

**L0 level** denotes normal times which will be utilized for close monitoring, documentation, prevention and preparatory activities. Training on search and rescue, rehearsals, evaluation and inventory updation for response activities will be carried out during this time.

L1 level specifies disaster that can be managed at the District level, however, the State and centre will remain in readiness to provide assistance if needed.

L2 level disaster situations are those, which require assistance and active participation of the state, mobilization of its resources for management of disasters.

L3 level disaster situation is in case of large scale disaster where the State and District authorities have been overwhelmed and require assistance from the Central Government for reinstating the State and District machinery as well as for rescue, relief, other response and recovery measures. In most cases, the scale and intensity of the disaster as determined by the concerned technical agency like IMD are sufficient for the declaration of L3 disaster.



## 1. 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 <u>disaster recovery</u> 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 Devbhumi Dwarka district 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 disasters.
- Promoting a culture of prevention, preparedness and safety 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.

#### Scope of the Plan:

The Disaster Management and Response Plan for Devbhumi Dwarka District have been prepared for its operationalisation by various departments and agencies of the district and other Nongovernmental Agencies expected to participate in disaster management. 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 elaborate inventory of resources has also been formalized.

## c. Authority and Responsibilities:-

The requirement for district and subsidiary plans is set by the Gujarat State Disaster Management Authority (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 mitigate or reduce the impact of disasters.

The Collector (Specifically) and Government authorities (generally) are responsible for managing hazards and disasters, which affect a district, with support from GSDMA, the relief commissioner and other public and private parties as, may be needed. The roles, responsibilities and obligation of the Collector and other parties are set out in detail in the Act and are considered as part of this plan.

## D. Approach to Disaster Management:-

The Government of Gujarat takes an inclusive approach to disaster management. Disaster impact decrease is divided into three broad areas:

## **D.1 Warning, Relief and Recovery:**

Necessary actions are intended to eliminate the loss of life and property and hardship due to disasters. Plans and SOPs at District level should provide as seamless as possible provision 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 answerable for coordinating warning, relief and recovery with similar activities in neighboring 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 coordinate with the GSDMA in terms of policy and implementation.

#### **D.2 Mitigation, Preparedness and Prevention:**

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

- Long term planning for mitigation, preparedness and prevention investments in the district,
- Enforcement of regulations, particularly building and safety codes and land use plans,

- Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and,
- Capacity building including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability.

The Collector, assisted by the District Development Officer, is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above.

The overall approach to disaster management is based on six elements;

- Precise risk and Vulnerability assessment
- Planning and efficient allocation of resources,
- Capacity building and training
- Provision of ample resources
- The assignment of disaster management roles and responsibilities which correspond to normal roles and responsibilities (if possible) and,
- Use of diverse legal and operational mechanisms to accomplish disaster management objectives.

Base on the interim assessment of risk and vulnerabilities, the District will focus on the following areas for mitigation, preparedness and prevention;

- Resilience of lifeline systems (water, power and communications)
- Reduction in disaster impact on health care facilities, schools and roads
- Vulnerability reduction in flood-prone areas
- Vulnerability reduction to high winds
- Improvement of off-site Preparedness near industrial sites.

#### **D.3 Finance:**

The financial arrangement is as per the fund granted by GSDMA / State nodal agencies to the district. District Collector has authorities to distribute / impart the fund to the counter partners of Disaster management in the District as per required activities, according to the instructions of Government of Gujarat.

a. Preparations and Revision of The Plan :-

The District Collector is responsible for the preparation and revision of the District Disaster Management Plan in collaboration with the line departments and other organizations in the district. The plan should be reviewed annually/half yearly and updated:

- When significant changes in the nature of any hazards
- Lessons learnt following any major disaster or
- When there is any significant change to organization or responsibility of primary members of the task forces defined in the plan.
- DDMC shall compile its learning and proposed new mechanisms for improvement of the capacity to deal with disasters

#### Chapter: 1 Introduction

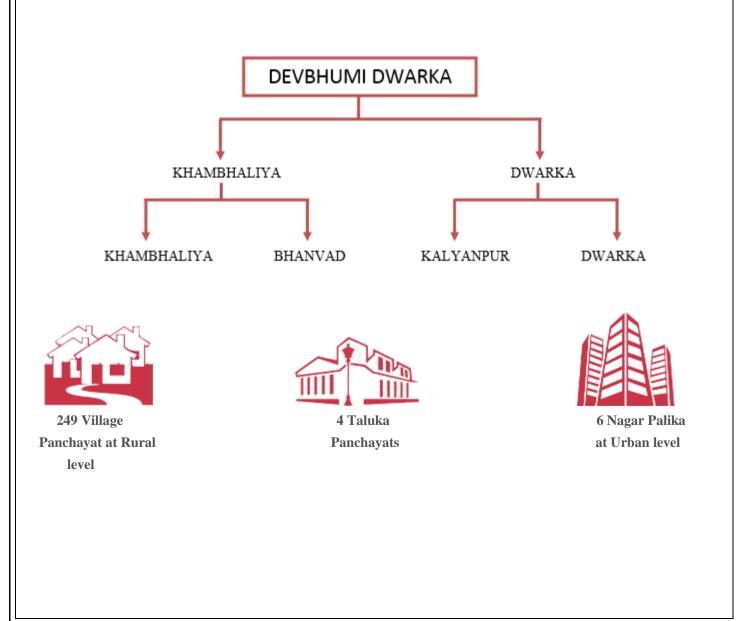
## ✤ <u>District Profile</u>:

## 1. Introduction:-

Devbhumi Dwarka District is located in southern coast of gulf of Kutchh in Gujarat state. The district was bifurcated on August 15, 2013 from Jamnagar District. The Headquarter of the Devbhumi Dwaka District is at Khambhaliya. Mainland of the district extends between 21-degree - 42 min and 22 degrees - 58-min north latitude and between 68 degree 58 Min and 70 degree - 40-min longitude. It is bounded by Gulf of Kutch in the north, Porbandar district in the south, Jamnagar district in the east and Arabian Sea in the west. The district is having an area of 4051 Sq. Kms. population of 738,520 lakhs persons (as per 2011 census) Density of population is 130 persons per sq. km. About 70 % of the population lives in the rural area. The literacy percentage of the district is 69%.

## 2. Area & Administration: - Geographical Information

The entire district is divided in to two Sub Divisions namely Khambhaliya and Dwarka for smooth and effective administration of the district. Each sub Division has two Taluka under jurisdiction as per the new policy of the Government of Gujarat of ATVT (Apno Taluko Vibrant Taluko).



Sr.no.	Name Of Taluka	Number of villages
1	Khambhalia	85
2	Bhanvad	53
3	Kalyanpur	66
4	Dwarka	45
	Total	249

Besides, there are 249 Village Panchayats at rural level, 4 Taluka Panchayats, A district Panchayat as Panchayati Raj system and 6 NagarPalika at the urban level for the administrative purpose. At the Sub Division level Prant Officer & SDM holds the office and a Mamlatdar in each Taluka Office for the smooth administration and quick disposal of services to the people of the district. District is headed by the Collector & District Magistrate.

The Police work under the supervision of the Superintendent of Police. The District Development Officer looks after the development activities of the district supported by the Taluka Development Officers in each Taluka and Heads of the various departments. At Village level, works of the Developments are done by Panchayat Mantri (formally known as Talati cum Mantri) under the Gram Panchayat and works of the Revenue are done by Revenue Talati under the Revenue Department.

## 3. <u>Climate</u>: - <u>Coastal Villages</u>

The Climate of Devbhumi Dwarka District can be regarded as one of extreme kind with hot summers & cold winters except in the coastal region, where it is generally pleasant all throughout the year. The air is humid due to coastal location. The Details of **coastal villages** are as under:

Sr.	Taluka		Population
No.		Coastal Villages	
1	Dwarka	20	81,848
2	Khambhaliya	15	47,841
3	Kalyanpur	9	20,844
	TOTAL	44	1,50,533

## 4. River & Dams:-

The District has no major river. There are seasonal rivers streams. Amongst these are the river Sani, Sinhan Vartu, Ghee, Kabarka and Ghee. Flow of the river is towards the Gulf of Kutch in the north and in north-west.

There are no major dams in Devbhumi Dwarka District. There are 10 medium and minor dams are in the district. Details of Dam are attached in separate Annexure-3 sheet.

## 5. Ports & Fisheries:-

Out of 1600 Kms Length of Coastal line of Gujarat the coastal belt of Devbhumi Dwarka District is having 235 Kms of coastal line extending from Vadinar village in the northwest to Harshad village in south west. There are 7 ports in the Devbhumi Dwarka District. Viz. Okha, Vadinar, Beyt, Harshad, Rupen, Salaya and Navadra are fisheries ports. There are 2822 motor boats in Devbhumi Dwarka District, while Jamnagar and Devbhumi Dwarka district combines total 40904(20935 Male, 19969 Female) fishermen out of which 9330 are active in fisheries activities.

Fishing activities has been carried out in 7 villages in Devbhumi Dwarka District. There are 40904 (20935 Male and 19969 Female) fishermen in Jamnagar and Devbhumi Dwarka district out of which 9330 are active fishermen. Total 2822 And 385 non mechanical boats are available in the district. Total 29 fishing societies have been registered in this district, out of which 18 are active.

### 6. Salt works:-

Due to large sea shore in the District, Salt Industries has developed very well. There are 5 Salt Works in the district and occupies 46678 acres of land (except Tata Chemicals Ltd.). Annual production of Industrial and table salt is around 27 Lacks M. Tones.

### 7. Live Stock:-

Cattle wealth occupies pivotal place in the rural economy of the district, Livestock position is as below:

Sr. no.	Name of Animal	No. of livestocks
1	Bullock/Cows	148849
2	Buffaloes	139843
3	Sheep & Goats	133423
4	Others Horse, donkey, camel	2131
	Total	424246

There are 13 Dispensaries and 07 First Aid Vaternity center available in the district as follows:

Sr.No.	Taluka	Dispensaries	First Aid Center
1	Khambhaliya	Khambhaliya, movan, Vadatra, Bhadthar	Salaya, Bhandariya
2	Dwarka	Dwarka, Soorajkaradi	Beyt
3	Bhanvad	Bhanvad, Gunda, Modpar	Pachhatar, bhangor
4	Kalyanpur	Kalyanpur, Lamba ,Bhatiya, Jamraval	Raan, Rajpara

## 8. Roads & Railway:-

The district has 1163 Kms length of pakka roads connecting to 432 villages/towns in the district. 249 villages are connected by kachha roads and 43 villages accessible only in fair weather.Out of the total 681 inhabited villages, 633 villages are connected by state road transport facilities.

Total length of railway track is 557 kms in the Rajkot region, out of that total covered under Broad Gauge. Total 13 Station is located in Devbhumi Dwarka district that is Jaliya Devani, Aliyabada, Jamvanthali, HAPA, Devbhumi Dwarka, Kanalus.

## 9. <u>Health</u>:-

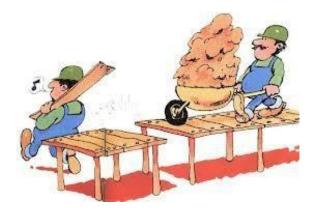
The district has 5 CHCs, 19 PHCs and 166 SHC in the District to cater the people. Location of the CHCs and PHCs and SHCs in different talukas of the District is as follows.

Sr. No.	Taluka	Name of CHCs	PHCs	SHC
1	Bhanvad	Bhanvad	5	35
2	Khambaliya	Salaya,	3	54
3	Kalyanpur	Kalyanpur, Raval	9	56
4	Dwarka	Dwarka	6	24
Total	1	5	23	169

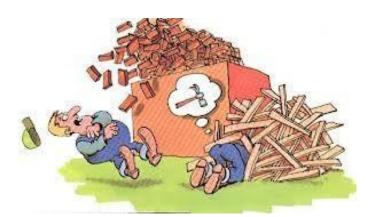
## 10. <u>Temperature and Rainfall data:</u>

The temperature at Devbhumi Dwarka district headquarters ranges from 42.0 degree centigrade higher in the summer and 4.2 degree centigrade lowest in the winter.

The average annual rainfall is 898 mm. The soil found in the District may broadly be classified as alluvial, black, light brown and alkaline. The last ten years rainfall data is attached in Annexure-2



## Chapter 2 HAZARD, VULNERABILITY AND RISK ASSESSMENT



#### Chapter: 2 HAZARDS, VULNERABILITY AND RISK ASSESSMENT

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.

#### ➢ <u>Matrix of past Disaster-Flood:</u>

Year	Magnitude	Talukas ar	nd No.Of	Life and cattle loss	Damage to	Economical
		villages affe	cted		Property	loss
2013	4	Devbhumi	Dwarka	11 Human Death	As Per ABCD	
		Taluka		and Cattle loss 74	report	

#### Matrix of past Disaster-Earthquake:

Year	Magnitude	Talukas and No.Of	Life and cattle loss	Damage to	Economical
		villages affected		Property	loss
2001	4	Zone VI Devbhumi Dwarka, Khambhalia,Dwark a,Kalyanpur Zone III Bhanvad,.			

#### Matrix of past Disaster-Cyclone:

Year	Magnitude	Talukas and No.Of villages	Life and cattle loss	Damage to	Economica
		affected		Property	1
					loss
1998	4	Very High Demage risk zone [50 m/s.] 1.717 million popultion an 17 ports in the district likely the be affected + 10 Taluka.			

## Chapter: 2 HAZARDS, VULNERABILITY AND RISK ASSESSMENT

## > Matrix of past Disaster-Industial Accident/Chemical disaster:

Year	Magnitude	Talukas and No.Of villages	Life and cattle loss	Damage to	Economical
		affected		Property	Loss
	5	Devbhumi Dwarka,			

## **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.

## <u>Risk and Vulnerability Analysis-State Level:</u>

Hazard	Probability	Impact	Vulnerability Rating (Probability times Impact)	Specific Locations and populations of concern.
Earthquake (resulting in damage)	4	4	16 [High]	Zone VI Devbhumi Dwarka, , Khambhalia., Dwarka, Kalyanpur, Zone III Bhanvad,
Wind (cyclone)	4	3	12 (Medium)	Very High Demage risk zone [50 m/s.] Ports and 3 Talukas (Khambhaliya, Kalyanpur and Dwarka)
Sea surge (cyclone)	3	3	9 (Medium)	0.22 Million [2, 27,264] population and 41 coastal villages in 3 talukas are likely to be affected. Maximum surg record 3 meter.
Flood	5	4	20 (High)	May occur due to very heavy rainfall, sea serge or dar failure
Thunderstorme & Lightining	3	3	9(Medium)	May occur due to rough weather condition
Industrial Accident	4	5	20 (High)	Mithapur,Kuranga, Bhogat,Vadinar, Khambhaliya

Drought	3	2	6 (Low)	Whole District
Heat/cold wave	4	2	8 (Medium)	
Hail storm	1	1	1 [Low]	
Landslides	1	1	1 [Low]	
Mudflows	1	1		
Dam Failure	1	1	1 (Low)	
Mine fires/collapse	2	1	2 [Low]	Dist. has no major dams
	-		_ []	but having 15 medium/minor dams.
Road/rail/air accident	5	4	20 (High)	Devbhumi Dwarka High way connected villages.
Oil spill & Road (marine)	3	2	6 (Low)	Sea shore, coastal belt
Boat sinking	4	2	8 (Medium)	
Building collapse	4	3	12 (Medium)	6 ULB & Dwarka City
Communal Disease	3	3	9 (Medium)	
(epidemics)				
Food poisoning	3	3	9 (Medium)	
Animal disease (epidemics)	2	3	6 (Low)	
Terrorism	1	3	3 [Low]	
(consequences)				
Critical	4	3	12 (Medium)	The Hydrocarbon
Infrastructure				Cross-country pipeline
Failure (e.g.				running for Devbhumi
extended power				Dwarka may be
outage)				affected.
Civil Unrest	3	2	6 (Low)	
WAR	2	4	8 (Medium)	Whole District (19.05 Lacs)
TSUNAMI	2	4	8 (Medium)	Coastal Talukas : Kalyanpur Khambhaliya Dwarka (Okhamandal) Total 41 Coastal Villages

#### Chapter: 2

HAZARDS, VULNERABILITY AND RISK ASSESSMENT

## **METHODOLOGY OF HRVA**

Data collection from all line departments

Data analysis

Discussion with experts

Referring national and international literatures

Preparation of action plans for departments

Preparing draft plan document

Mock drill to check the viability and feasibility of implementation methodology

Vide circulation for public and departmental comments

Preparation of the final plan document

#### 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 years period.
Rate	1	Can be expected to occur sometime in a 100 year period

#### 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.

### Chapter: 2 HAZARDS, VULNERABILITY AND RISK ASSESSMENT

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: 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; sores between 7 and 15 indicate medium vulnerability and scores below 7 indicate low vulnerability.

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

### 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 "Phenomena 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.

#### Chapter: 2 HAZARDS, VULNERABILITY AND RISK ASSESSMENT

#### 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 an 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. Devbhumi Dwarka District's situation indicates that some parts of the District like Jodiya, Dhrol and Devbhumi Dwarka 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 District. All the major river systems in the District are vulnerable to flooding, as captured in the Vulnerability Atlas. The urban areas like Devbhumi Dwarka, Jodiya, Khambhalia and Kalyanpur are facing flooding primarily due to drainage and increased run-off loads in hard surfaces.

#### Regulations would include.

- o Not permitting unrestricted new development in the hazard prone areas
- o Anchoring and flood proofing structures to be built in known flood prone areas
- o Built-in safe guards for new water and sewage systems and utility lines from flooding
- o Enforcing risk zone, base flood elevation, and flood way requirements
- o Prohibition on development in wetlands
- o 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.

#### Chapter: 2 HAZARDS, VULNERABILITY AND RISK ASSESSMENT

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

o Map the extent of land covered by past flood waters

o Get an indication of the depth of past flood waters

o 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

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

#### **3.** Thunderstorme & Lightining

Lightning is also one of the Weather related Natural Disasters which normally is associated with Thunderstorms. During Lightning, due to the friction between the ice particles in the cloud, a sudden electrostatic discharge occurs between electrically charged regions of a cloud called intracloud lightning (IC), between Cloud to Cloud (CC lightning), or between a cloud and the ground (CG lightning). The charged regions in the atmosphere temporarily equalize themselves through this discharge referred to as a flash. A lightning flash can also be a strike if it involves an object on the ground. Lightning creates light in the form of black body radiation from the very hot plasma created by the electron flow, and sound in the form of thunder. The lightning causes several deaths and loss of property across India.

Thunderstorms occur round the year in different parts of the country. However, its frequency and intensity is maximum in summer months (March to June). As the most important factor for occurrence of thunderstorm is the intense heating of the atmosphere at surface level and maximum heating takes place in summer months, the frequency of occurrence is maximum in summer months. A thunderstorm is said to have occurred, if the thunder is heard. Usually the thunder can be heard up to a distance of 40 km from the source of origin. Thunderstorms fall in the category of Meso-gamma weather systems with spatial extent of around 2~20 km and temporal scale of a few hours. Considering the intensity, the thunderstorms in India are categorised as moderate and severe thunderstorms as follows.

• <u>Moderate thunderstorm</u>: It is called as moderate thunderstorm, if there is loud peals of thunder with frequent lightning flashes, moderate to Strong rains and maximum wind speed 29 to 74 kmph

• <u>Severe thunderstorm</u>: It is called as severe thunderstorm, if there is continuous thunderand lightning, Strong rains and maximum wind speed  $\ge$  75 kmph

Lightning is a high-energy luminous electrical discharge from a thundercloud to the ground accompanied by thunder. In the atmosphere, three types of discharges take place:

1) Thundercloud (intra-cloud),

2) One cloud to another (inter-cloud)

3) Cloud to ground (CG).

The third type of lightning takes a toll on life and property and so is of more concern to us. Aircrafts can be hit by inter cloud and intra-cloud lightning. Lightning is a highcurrent electric discharge that occurs in the earth atmosphere and that has total path length on the order of few kilometers. The peak power and total energy in lightning are very high, the peak power that is dissipated by a lightning discharge is on the order of 100 million watts per meter of channel and the peak channel temperature approach 30,000 °C. Peak currents in a lightning discharge range from several to hundreds of kiloamperes (kA), with typical value being 40 kA. Prediction of lightning as to the precise time and location is very difficult or impossible. However, somewhat a season or period of lightning occurrence at many regions is known

#### 4. 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 counter clockwise 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 like Devbhumi Dwarka, Khambhalia, Kalyanpur and Dwarka -Okha 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. At a community level, the GSDMA has proposed to provide temporary cyclone shelter. There are 31 identified sites to construct Cyclone Shelter on Costal Belt of Devbhumi Dwarka District. These shelters will be, with built-in safety against high wind velocity and heavy rainfall and within easy reach of the people most affected. Educational buildings or places of worship may also be designed as cyclone shelters, for evacuation and temporary occupation.

#### > Nilofar:

The cyclone storm NILOFAR was originated in Arabian sea on 26/10/2014. The Cyclone storm, NILOFAR over west central and adjoining southwest Arabian sea move northwards, intensified into a severe cyclonic storm and lay centred at 05:30 hours of 27/10/2014 near latitude 14.8° N and longitude 62.0°E, about 1180km southwest of Naliya . Under the influence of this system, Rainfall at most places with isolated heavy to very heavy falls would commence along coastal districts of saurastra and kutch intensity would increase gradually with heavy to very heavy falls at a few places from night 30<sup>th</sup> October. Squally winds speed reaching 45-55 kmph gusting to 65 kmph would commence along and off Gujarat coast from 30<sup>th</sup> October morning and would become 100-110 kmph gusting to 125 kmph at the time of landfall. Sea condition along and off Gujarat coast will be rough to very rough from 30<sup>th</sup> October. However, on 30/10/2014 as it come closer to Gujarat coast, it was weaken and dispersed in Arabian sea.

4 Action Taken:-

- Collector, Resident additional collector, Liaison officer, Dy. Mamlatdar visited Gandhvi, Bhogat, Navadra, Harshad villages. They had held a meeting with villagers and aware them to be prepared for migration from
- village to safe shelters when they got a message from Control room.
- Petrol pumps, FPS were instructed to keep stocks for emergency.
- Talatis were instructed to be alert and in communication with collector office.
- NGOs were instructed to be prepared for food packets needed during cyclone.
- At district Level, Meeting had been organized with District officials.
- The boat service had been canceled between Dwarka to Bet.
- Boats were called back which was gone in sea for fishery.

#### Chapter: 2 HAZARDS, VULNERABILITY AND RISK ASSESSMENT

- NDRF, Special rescue teams were standing by at Dwarka.
- Do's and don'ts were published in local news paper.

## Vayu Cyclone: 12/062019 to 15/06.2019 Maha Cyclone: 04/11/2019 to 05/11/2019 Nisarga Cyclone: 03/06/2020 to 05/06/2020 Tauktae Cyclone: 14/05/2021 to 18/05/2021

#### 5. 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.

Devbhumi Dwarka district 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 7 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.

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

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

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

## 6. 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. Landslides, volcanic eruptions, and even meteorites can also generate a tsunami. Areas at greatest risk are less than 25 feet above sea level and within one mile of the shoreline. So far as Devbhumi Dwarka District is concern there are 5 costal talukas and as per Analysis of Mean Sea level of Devbhumi Dwarka District there are 52 villages of 6 costal taluka are 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.

#### 7. **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 Paraprofessionals 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.

Novel Corona Virus 2019-

#### 8. Nuclear Disaster: -

In the Past no nuclear disaster was occurred..

#### 9. Drought:

Low rainfall coupled with erratic behavior of the monsoon in the state make Jamnagar/Devbhumi 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.

#### **10. 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.  $\backslash$ 

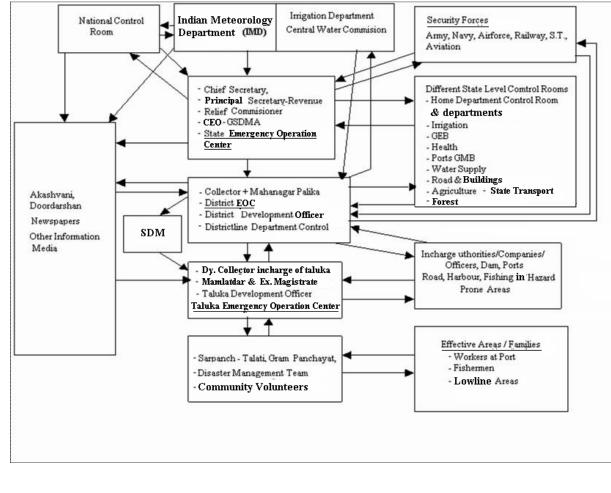
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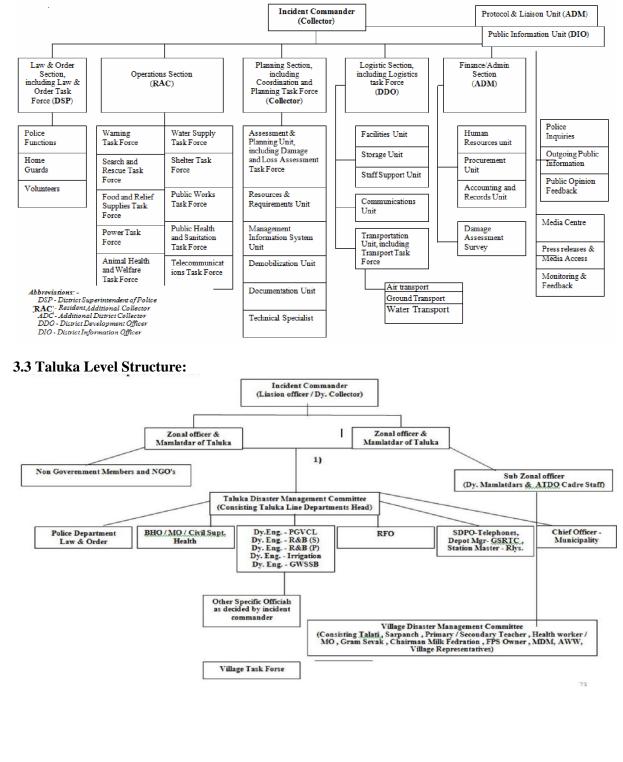
At the district level, the District Magistrate will be the focal point for coordinating all activities relating to prevention, mitigation and preparedness apart from his existing responsibilities pertaining to response and relief. The District Coordination and Relief Committee is being reconstituted/re-designated into Disaster Management Committees with officers from relevant departments being added as members. Because of its enhanced mandate of mitigation and prevention, the district heads and departments engaged in development will now be added to the Committee so that mitigation and prevention is mainstreamed into the district plan. The existing system of drawing up preparedness and response plans will continue. There will, however, also be a long term mitigation plan. District Disaster Management Committees have already been constituted in Devbhumi Dwarka districts.

The model bye-laws, DM Policy, Act and model health sector plan have also been included. Education and Training includes material for capacity building and upgradation of skills of policy makers, administrators, trainers, engineers etc. in planning for and mitigating against natural disasters. Basic and detailed training modules in disaster preparedness have been incorporated along with training methodologies for trainers, for community preparedness and manuals for training at district, block, panchayat and village levels. For creating a disasterresistant building environment, the Construction Toolkit addresses the issue of seismic resistant construction and retrofitting of existing buildings. BIS Codes, manuals and guidelines for RCC, Masonry and other construction methodologies as also for repair and retrofitting of masonry and low-rise buildings have been included.



#### 3.1 State Disaster Response Structure – Gujarat:

For effective response the Incident Command System (ICS), need to be put into place with clear responsibility. The commander for each tasks force need to be trained on the specific tasks. Incident Commander (IC) at block level instructs head of task forces to carryout emergency functions according to SOPs. Head of each task force reports to IC on progress (and any obstacles faced) until he/she is further instructed by IC.



## 3.4 SEOC-DEOC-TEOC and Other Control Rooms.: Emergency Operation Centers/Control Rooms

#### □ District Emergency Operation Center(DEOC)

□ The District Emergency Operation Center (DEOC) is located at District Collector's Office. It is also the central point for information gathering, processing and decision making more specifically to combat the disaster. Most of the strategic decisions are taken in this control room with regard to the management of disaster based on the information gathered and processed. The Incident Commander takes charge at the District Control Room and commands the emergency operations as per the Incident Command System organizational chart.

All the task force leaders shall take position in the District Control Room along with Incident Commander to enable one point coordination for decision-making process.

#### □ Facilities at District Control Room

The District Control Room shall be equipped with but not limited to the following items:

- □ Hotline directly connected to State EOC/Control room
- □ Telephones
- □ Satellite Telephone
- □ Satellite Iridium
- □ One PC with Internet facilities
- □ Marker board- 2 Nos. with adequate markers
- $\Box$  Conference table with Chairs
- □ A copy of Disaster Management Plan
- $\Box$  Other relevant documents, if any

#### □ Task Force Control Room (TFCR)

Individual Task Force function shall activate & operate their respective control rooms in their office managed by a competent person who is proficient in communication and technically capable of coordinating with Taluka Level Control Room and District Control Room and mobilize requisite resources to the disaster site.

#### □ Taluka Level Control Room (TLCR)

The Taluka Level Control Room shall be located at the Office of Mamlatdar. The Liaison Officers of the respective Talukas shall take charge of the Control Room. The respective liaison Officers shall coordinate between the task group members working at disaster sites and TFCR for mobilization of resources and dissemination of instructions received from TFCR/DEOC.

#### □ Facilities at Taluka Level Control Rooms (TLCR)

The following facilities are maintained inside TFCR:

- □ Telphones
- $\Box$  Marker board (1)
- □ A copy each of Disaster Management Plan and Taluka Level Plan
- □ Other relevant documents, if any

Responsibility of up keeping and maintenance of all the above items / facilities in the respective Control rooms is given as below.

#### DCR : District Collector or any person nominated

TFCR : Respective Task Force Leader

TLCR : Respective Taluka Liaison Officer

he above responsible Depts./ personnel shall carryout periodic inspection of such facilities in their respective control rooms at the frequency set by them and maintain records on the same.

Response defines provision for assistance/ intervention during and after emergency. Response plan includes clear Incident Command System (ICS) operated through emergency operation centers (EOCs) with effective 3C (Command, Control and Communication) mechanism. ICS covers early warning, search and rescue, humanitarian assistance, medical response, relief, temporary shelter, water and sanitation, law and order, animal care, public grievance, recovery and rehabilitation.

#### 3.5 Early Warning System (EWS) and Post Disaster Advisories:

It is often observed that communities living in remote and isolated locations do not receive timely and reliable warnings of impending disasters. Hence, it is necessary to have robust and effective early warning systems, which can play crucial role in saving lives and limiting the extent of damage to assets and services. Outreach and reliability of warnings are key factors for planning and implementing response measures. Post disaster advisories like information on rescue, relief and other services are important to ensure law, order, and safety of citizens.

#### 3.6 Information Dissemination:

The dissemination of information is the most critical function in order to give early warning to the community. It has to be fast in order to give reasonable amount of time for communities to prepare for any eventuality. Due consideration has to be given to the points mentioned below before sending across the information.

> Information dissemination will be done to all the important stakeholders (as given below in the information dissemination format) at the Panchayat level in rural areas and Nagarpalika level in urban areas for early warning communication.

 $\succ$  Making use of the fastest means to communicate the message in the most lucid manner so as to prevent spread of rumor and panic among the masses.

Bulk Voice SMS Service is the best means of communication to large masses without any effort and within no time. A voice recorded message from the District Magistrate from official number shall be sent to the database of numbers identified for information dissemination with the help of Mobile service providers & Telephone department.

#### 3.7 Early Warning Action Plan :

The availability of early warning system is a must before early warning message could be disseminate to the people till the last mile. Thus for every type of disaster there is an agency designated with the responsibility of keeping track of developments in respect of specific hazards and inform the designated authorities/agencies at the district level about the impending disaster. Nodal agencies for early warning of different natural hazards are:

Type of Action	Flood	Cyclone	Chemical and	Tsunami
		•	industrial accident	
Existing EWS	Irrigation	IMD	Industrial	IMD
	department	$\checkmark$	Association/industrie	$\checkmark$
	/dam authority/	Collector	S	Collector
	IMD	$\mathbf{+}$	$\mathbf{+}$	$\mathbf{+}$
	$\mathbf{+}$	Mamlatdar/TDO	DCG	Mamlatdar/TD
	Collector	$\bullet$	↓	o↓
	$\bullet$	Villages	LCG	Villages
	Mamlatdar/TDO		¥	
	•		Mamlatdar	
	Villages			
Responsible	Mamlatdar	Mamlatdar	Mamlatdar	Mamlatdar
Agency for	office/TDO	office/TDO	office/TDO	office/TDO
warning				
dissemination				
Trained personnel	Yes	Yes	No (Team to be	No (Team to be
and operators			formed and trained )	Formed and
available (Y/N)				trained)
Villages covered	All risk prone villa	iges		
Villages/habitat	Communities in re	mote locations ( fish	er folk, salt pan workers	, maldharis etc)
not covered or			*	
difficult to access				
Measures required	Contact of commu	nities in remote loca	tions (fisherfolk, saltpan	workers,
to improve	Maldharis etc)			
timeliness and				
outreach (For				
example, voice				
enabled SMS)				
During and Post Di	soster Advisory Ac	tion Plan •		

#### During and Post Disaster Advisory Action Plan :

Type of Hazard	Flood	Cyclone	Earth quake	Drought	Chemical and industrial accidents	Tsunami
Responsible	Revenue	Revenue & Panchyat offices				
Agency						
Villages covered	All risk	All risk prone villages				
Villages/habitation		communities in remote locations ( fisher folk, salt pan workers,				
not covered or	Maldha	ris etc)				
difficult to access						
Measures required	Contact	of communit	ies in remote	locations ( fi	sher folk, salt	panworkers,
for outreach	Maldha	ris etc)				

### 3.8 VIP involvement and protocol

It is important to immediately inform VIPs and VVIPs on impending disasters and current situation during and after disasters. Appeals by VIPs can help in controlling rumours and chaos during the disaster. Visits by VIPs can lift the morale of those affected by the disaster as well as those who are involved in the response. Care should be taken that VIP visits do not interrupt rescue and life saving work. Security of VIPs will be additional responsibility of local police and Special Forces. It would be desirable to restrict media coverage of such visits, in which case the police & taluka liaison officer will liaise with the government press officer to keep their number to minimum.

## 3.1.9 Media Management

The role of media, both print and electronic, in informing the people and the authorities during emergencies becomes critical, especially the ways in which media can play a vital role in public awareness and preparedness through educating the public about disasters; warning of hazards; gathering and transmitting information about affected areas; alerting government officials, helping relief organizations and the public towards specific needs; and even in facilitating discussions about disaster preparedness and response. During any emergency, people seek up-to-date, reliable and detailed information.

Devbhumi Dwarka Collectorate office has established an effective system of collaborating with the media during emergencies. Both print and electronic media is regularly briefed at predetermined time intervals about the events as they occur and the prevailing situation on ground. A similar set up is also active at the Taluka Control room (i.e. Mamlatdar office)

#### 3.10 Role of Emergency Organization :

The District Collector shall be the Overall Incident Command Officer of emergency operations as the District Devbhumi Dwarka Emergency Authority and S/he shall provide suitable instruction to the District Crisis Group.

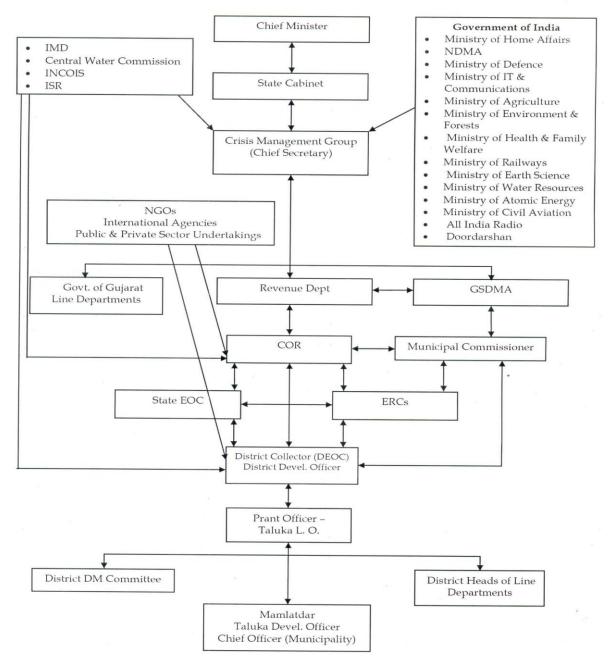
• The Collector shall seek help from Chief Secretary, Chairman, State Crisis Management Group, Gujarat State depending upon the state of emergency.

For this he shall be in touch with State Control Room, Gandhinagar or Chief Secretary, Gujarat State for progress of emergency.

## **4** Institutional Arrangement:

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.





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.

Sr.	Detail
No.	
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 Defense
21	District Education Officer
22	District Primary Education officer
23	NGO Member
24	Media Person

## **B. DDMC: -District Disaster Management Committee:**

## 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</u>	- Government Members
18	Present-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 / Nagarpalika, 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.

# Chapter 3 Institutionalisation and Multihazard Response Measures

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	Medival Officer-C.H.C.
12	Medical Officer Municipality Health Centre
13	Head Transport committee
14	PI/PSI
15	Taluka Homeguard Commandent
16	Education Officer Municipality Education committee
17	Project Coordinator-UCD
18	Port officer
19	Range forest officer-Extension
`Non Gover	nmental 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

# Chapter 3 Institutionalisation and Multihazard Response Measures

# 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	Fair price shop holder

# Chapter 3

Institutionalisation and Multi hazard Response Measures

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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 DEVBHUMI DWARKA DISTRICT:

No.		Artical includeed each ECRs		in
	Name of Taluka Mamlatdar Office	Life Saving Jacket	200 ft. Ropes	100 ft.Ropes
1	Mamlatdar Office – Khambhalia	20	2	4
2	Mamlatdar Office – Dwarka	20	2	4
3	Mamlatdar Office – Kalyanpur	20	2	4
4	Mamlatdar Office – Bhanvad	5	0	0

# **4** Public and private emergency service facilities available in the district

Sr. No.	Municipality	Water Bouser	Fire	Inflatable	Fire	Remarks
			Tender	Light	Bullet	
1	Bhanvad	1	1	2	-	-
2	Khambhalia	1	2	2	1	1 Boat
3	Rawal	1		2	-	-
4	Dwarka	2	2	2	1	1 Boat
5	Okha	1	1	2	1	1 Boat
6	Salaya	1	1	2	1	-

# **4** And Health Sector as following

Sr. No.	Taluka	Name of CHCs	PHCs	SHC
1	Bhanvad	Bhanvad	5	35
2	Khambaliya	Salaya,	3	54
3	Kalyanpur	Kalyanpur, Raval	9	56
4	Dwarka	Dwarka	6	24
Total	1	5	23	169

# Chapter 3 Institutionalisation and Multihazard Response Measures

# > 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.

Sr. No	Hazard/Disaster	Agency
1	Earthquake	Indian Materiological
		Department
2	Flood	Indian Materiological
		Department,
		Irrigation Department
3	Cyclone	Indian Materiological
		Department
4	Epidemics	Public Health Department
5	Road Accidents	Police
6	Indistrial/Chemical Accidents	Industries, DISH, Police,
		Mutual aid Control Room
7	Fire	Fire Brigade, Police
8	Rail Accidents	Railways, Police
9	Air Accidents	Airlines, Police
10	Ammunition Depot-Fire	Army, Police

# > The occurrence of the disaster will be communicated to :

The 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, NDMA, Ministry of Agriculture, GOI Local Area Commander of the Army.

# Chapter 3 Institutionalisation and Multihazard Response Measures

# > 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 has 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 from will continue to operate as long as the need for emergency relief and operations continue and the long-terms plans for rehabilitation are finalized for managing long-term rehabilitation programmers, 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.

# Other line department EOC/Control Room should be activated for response against disaster.

- ✓ TEOC
- ✓ Nagar palika
- ✓ Irrrigation department
- ✓ PGVCL
- ✓ Water Supply
- ✓ Fishries
- ✓ Port
- ✓ GWSSB
- ✓ District Panchayat
- ✓ Police
- ✓ Home Guard
- ✓ Information Department
- ✓ Salinity Control
- ✓ Forest
- ✓ S.T



# Chapter 4 Preparedness, Prevention & Mitigation Measures



Personal preparedness focuses on preparing equipment and procedures to use when a disaster occurs, i.e., planning. Preparedness measures can take many forms including the construction of shelters, implementation of an emergency communication system, installation of warning devices, creation of back-up life-line services (e.g., power, water, sewage), and rehearsing evacuation plans. Proper Preparation can save time, money and lives. Planning for all different types of events to magnitudes in at utmost importance for disaster.Proper planning is instrumental during times of chaos to make situations less stressful. With proper planning duties will be pre-assigned to different agencies, so that when disaster does occur responders can jump right into action.

Two simple measures can help to prepare the individuals for either sitting out the event or evacuating, as necessary.

For evacuation, disaster supplies kit may be prepared and for sheltering purposes a stockpile of supplies may be created.



# > Prevention and Mitigation Plan:

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.

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.

# Mitigation Measures

Probable Mitigation Measures	Implementing Departments	Convergence with Scheme/ Program	Time Frame
Desilting and deepening of water chanel (kaans)	Irrigation and Rural Development, GLDC	Departmental program & MGNREGS,	2014-15
Construction of embankments/ protection wall	Rural Development, Forest	Departmental program & MGNREGS, watershed,	2014-15
Repair of embankments/ protection wall	Rural Development, R & B	Departmental program & MGNREGS	Regularly
Repair and maintenance of Flood Channels, canals, natural drainage, storm water lines	Irrigation department	Departmental or special plan	2014-15
Construction of Safe Shelters (new construction through	Collectorate and R&B	NCRMP	Regularly

# Structural Mitigation Measures for Flood (Identified works of concerned Departments):

Probable Mitigation Measures	Implementing Departments	Convergence with Scheme/ Program	Time Frame
Indira Awas, Sardar Awas and Ambedkar Awas)			
Protection wall and mangroves and vegetative cover against sea level intrusion and land erosion	Forest and Rural development department	Department schemes, MGNREGS, IWMP	2014-15
Desilting of water bodies like river and ponds	Irrigation DDO Rural Development	MGNREGA and Land Development	2014-15

# > Non-Structural Mitigation Measures for Flood

Non-Structural measures	Implementing Departments	Convergence with agency/program	Time Frame
Safety audit of existing and proposed housing stock in risk prone areas	DDO, Rural development	IAY, Sardar Awaas and other rural housing schemes	Regularly
Promotion of Traditional, local and innovative practices like bamboo/plastic bottle rafts etc	DDMC, SHGs and youth groups, NGOs	Training and capacity building plan for disaster management	2014-15
Capacity building of volunteers and technicians	DDMC	Training and capacity building plan for disaster management	2014-15
Awareness generation on health and safety of livestock	veterinary officer, rural development	Departmental Scheme	Regularly

# > Structural Mitigation Measures for Cyclone

Structural measures	Identified Locations and Villages	Implementing Departments	Convergence with Scheme/Program	Time Frame
Plantations (mangroves) and Shelter Belt in the Coastal Area	Cyclone prone 41 villages	Forest department, Port Authority, DIC, TDO, Rural development department	Departmental schemes, MGNREGS	2014-15
Identification and repair/ retrofitting of houses and buildings unsafe for cyclone		R & B (Zila Panchayat)	Departmental Scheme	Regularly

# > Non-Structural Mitigation Measures for Cyclone :

Non-Structural measures	Location/ coverage area	Implementing Departments	Convergence with agency/ program	Time Frame
Strengthening of Early warning mechanisms	Cyclone prone 41 villages	DDMC		Regularly
Training and awareness generation for use of safety jackets/rings/buoys/rope etc for fisher folks	U	DDMC, TDMC, VDMC	TDMP	2014-15
Enforcing strict compliance to coastal regulation zone		Department of Environment & Forest		2014-15
Registration of fishing boats		Fisheries Department		2014-15
Regulate and issue orders for poor quality hoardings/buildings or any other objects		R & B Department		Regular Intervation

# > Structural Mitigation Measures for Earthquake:

Structural measures	Identified Locations and Villages	Implementing Departments	Convergence with Scheme/ Program	Time Frame
Retrofitting (if required) of public utility buildings like offices, schools/ banks/ markets etc	Taluka	R & B (State and Panchayat), DDO, Rural department		-
Retrofitting of unsafe rural houses		DDMC	Rural housing schemes and departmental programs	-
Identifying and safely dismantling unsafe structures		R & B department		-

# > Non Structural Mitigation Measures for Earthquake

Non-Structural measures	Location/ coverage area	Implementing Departments	Convergence with agency/progr am	Time Frame
Capacity building of architects, engineers and masons on earthquake resistant features	EQ prone 3 Taluka under zone 4	R & B (State and Panchayat), DDMC		Regular Interval
Registration of trained and certified mason		R & B (State and Panchayat), DDMC		Regular Interval
Strict enforcement of guideline pertaining to seismic safety for government rural housing		DDO	Rural housing schemes	Regular Interval
Mock-drills for Schools, Hospitals and , Public Buildings and trainings for mason, engineers and architects		DDMC, Schools	DDMC	Regular Interval

# > Structural Mitigation Measures for Drought

Structural measures	Identified Locations and Villages	Implementing Departments	Convergence with Scheme/ Program	Time Frame	
Development of Pasture land in common property, seed farms and trust land	Drought prone villages	Forest, Rural Development, Panchayat	Departmental Scheme	2014-15	

Structural measures	Identified Locations and Villages	Implementing Departments	Convergence with Scheme/ Program	Time Frame
Rain Water Harvesting storage tanks at household level and public buildings		GWSSB, (WASMO), Rural Development,	MGNREGS, Swajaldhara	2014-15
Structures for water harvesting and recharging like wells, ponds, checkdams, farm ponds, etc	1	DDO, Rural development, irrigation department	MGNREGS ,Watershed program, departmental schemes	2014-15

# > Non-Structural Mitigation Measures for Drought

Non-Structural measures	Locations/ coverage area	Implementi ng Departmen ts	Convergenc e with agency/ program	Time Frame
Listing/developing shelf of work for drought proofing/scarcity works including Identification of potential sites of water bodies	Drought prone villages	Rural Developme nt	MGNREG S	2013-14
Farmer education to practice drought resistant crops and efficient water use		Agriculture & horticulture department	Departme ntal schemes	2013-14
Set up control mechanism for regulated water use (ponds, small dams, check dams) on the early unset.		Panchayats		Regularly

# Industrial (Chemical) Structural Measures (in coordination with LCG, DCG district and state level authorities):

Structural measures	Activities	Implementin g Department s	Convergence with agency/ program	Time Frame
Monitoring impact of industries on NRM (land, water and air)	Data collection of impact on natural resources (ground water monitoring wells, air quality test, etc)	DDMC, DCG GPCB		Regular interval
Safety assessment	Carry out structural safety inspection/audit	DISH, DCG (		regular interval

	Asst.Director . Industrial safety and health)	
Any Other		 

# Industrial (Chemical) Non-Structural Measures (in coordination with LCG, DCG, district and state level authorities):

Non tructural Measures	Activities	Implementing Departments	Converge nce Agencies	Time Frame
Planning	Prepare an onsite and offsite emergency plan	Occupier, DISH		regular interval
	Conduct mock drills as per the regulations	DISH and LCG		regular interval
	Update the plan as per the requirement	Occupier, DISH		regular interval
	Monitor similar activities in all the factories/ industries	DISH and LCG		regular interval
Capacity Building	Develop IEC material for Publication & Distribution	TDMC		Periodiccal ly
	Awareness generation to general public and medical professional residing near MAH factories for immediate steps	TDMC, LCG		Periodiccal ly
	Organize training programmes, seminars and workshops (e.g. for drivers of HAZMAT transport, line departments officers, Mamlatdar etc)	TDMC, LCG		Periodiccal ly
	List of experts/ resource person/ subject specialist (District emergency Off site plan)	TDMC, LCG		Periodiccal ly
	Encourage disaster insurance	Labour & employment department		Periodiccal ly
Medical	Listing of hazardous chemicals and gases.	Occupier, LCG, DISH, THO		
	Keep check on availability and validity of relevant antidotes for chemical hazards prevalent in Taluka	Occupier, LCG, DISH, THO		
	Workshops and trainings for medical professionals to handle potential chemical and	THO, Occupier, LCG, DISH		Regularly

Non tructural Measures	Activities	Implementing Departments	Converge nce Agencies	Time Frame
	industrial hazard			
Compliance	Environmental Protection Act, Factory Act, Mutual Aid SOPs	DISH , GPCB		Regular interval
	Any other			

At the District level, the District Crisis Management Group (DCG) is an apex body to deal with major chemical accidents and to provide expert guidance for handling them. DCG has a strength of 34 members which includes District Collector, SDM and Dy. Collector, DDO, Dy. Director – Industrial Safety & Health, DSP, PI, Fire Superintendent of the City Corporations or important Municipalities, Chief District Health Officer, Civil Surgeon, SE, Chief Officer, Dy. Chief Controller of Explosives, Commandant – SRPF, Group-I, Dy. Director – Information to name a few. At Taluka level Local Crisis Management Group (LCG) is formed for coordination of activities and executing the operations.

# > Structural Mitigation Measures for Tsunami:

Structural measures	Identified Locations and Villages	Implementing Departments	Convergence with Scheme/ Program
Constructing shelter belts in coastal areas	31 villages	Rural Development, GSDMA	Departmental programs , MGNREGS, NCRMP

# > Non-Structural Mitigation Measures for Tsunami:

Non-Structural measures	Locations/ coverage area	Implementing Departments	Convergence with agency/program
Provisions of Coastal Regulation Zone to be effectively implemented		Department of Environment &	as per norms
Capacity building of task forces in coastal villages		TDMC	Periodically

# List Of Ongoing Project

• DRM :

Disaster Risk Management Programme (DRM) has taken strong roots at various levels of administration in Gujarat. The Department of Revenue & Disaster Management is the nodal Department in Government of Gujarat that handles the subject with GSDMA. Disaster Management Committees are formed at various levels and are assigned the task of implementing the programme. Representation for these committees are drawn from elected representatives, officials of line departments, professional bodies, Civil Defense, NGO and CBO representatives and local opinion leaders. Major Activities are being carried out under DRM program are Plan Development at Various Levels, Emergency Resources Database maintain through SDRN / IDRN, Capacity Building through Trainings & Resource Mobilization, Disaster Awareness through Orientations, Campaigning, Media Management and IEC distribution. Coordinate District Administration for all Disaster Management Activities with expertise knowledge, logistics and fund allocation.

# • NCRMP:

Gujarat being prone to cyclones, it is the topmost priority of the State Government to reduce the effect of cyclone and minimize the loss to property and lives in the coastal regions of the State through creation of suitable infrastructure. Gujarat has therefore been included in the Natinal Cyclone Risk Mitigation (NCRMP) initiated by the National Disaster Management Authority and funded by the World Bank.

Under NCRMP Project 31 Multi purpose Cyclone shelters will be constructed in the villages of three blocks namely Kalyanpur, Dwarka and Khambhaliya.

# National School Safety Programme:

Gujarat School Safety Initiative (GSSI) - I & II. The pilot programs were designed for promoting a culture of disaster safety in schools and reduce risk through structural and non-structural measures in the schools.

# Gujarat School Safety Initiative - I

One hundred and fifty schools were selected from the cities of Ahmadabad (100), Jamnagar (15) and Vadodara (35) cities on basis of the school's disaster vulnerability, number of students and willingness to implement the suggested measures. The following activities were conducted in each of the project schools:

School management was first approached and a presentation was made about why and how the concerned school can work on school safety

A School Safety Committee was formed with the help of school administration

A three day programme on orientation of the school disaster management committee on school disaster management planning

Orientation about basic disaster awareness to coordinators and members of the school task forces

Detail training of the task force members on task force skills such as activities to be done for search and rescue, first aid, etc

Imparting lessons on emergency response in each classroom

Conducting mock drill and holding a debriefing meeting to evaluate the mock drill

Gujarat School Safety Initiative – I is completed in all the 152 schools, covering training of 1,00,000 students (primary and secondary standards) and 1,500 teachers in the basics of disaster management. School based DM plans were prepared for all the 152 schools. Earthquake drills were conducted in 80 schools attended by around 40,000 students and 640 teachers. As part of the long-term sustainability of the program, an assessment of non-structural mitigation measures was completed and school safety clubs have been opened in all the project schools. A short play on disaster awareness was also organized in 68 schools.

#### **Gujarat School Safety Initiative – II**

This initiative was designed for creation of cadre of master trainers and a pool of trained teachers at district level in disaster risk reduction across all the 25 districts of the State. It was designed for creating a pool of 100 Master Trainers (4 from each district). These master trainers would provide training to 625 teachers (25 from each district). Twenty five model schools were selected & School DM Plans were prepared involving the trained teachers. It was planned that trainings will be conducted for 1,000 teachers and 7,500 students in model schools.

#### **Gujarat School Safety Week Programme-2017**

For the year 2017 the programme is expanded to all government primary, secondary and higher secondary schools are covered. The training to celebrate the school safety week in school was given to more than 1000 teachers from all schools of the district. School disaster management plan in all schools of the district has been prepared in April-2017.

#### Aapda Mitra

Community service has always been a part and parcel of culture of Gujarat and community is always the first responder during any disaster. Training the community to efficient efficiency respond during a disaster, pprofessionalize the response and reduce the impact of a disaster.

GSDMA undertakes various capacity building activities to mitigate the impact of disaster. As part of such capacity building measures, GSDMA is implementing the project Aapda mitra on training community volunteers in conducting basic search and rescue operations and to assist the district administration for effective disaster response.

Aapda mitra is a key initiative which involves training of community volunteers in search and rescue operation, first aid, flood rescue. These volunteers will also support the district administration in responding to the disaster In first phase of the prigram, GSDMA trained 1671 Aapda mitras from all the district of Gujarat. In District Devbhumi Dwarka we have 24 aapda mitra volunteers(6 Volunteer per block.)

#### **Structural: Structural Mitigation Measures**

**a.** Retrofitting of Buildings: In Jamnagar region maximum buildings are non-engineered or kuchcha, having lower seismic resistant capacity. There are mainly four major types of constructions:

Category A:	Adobe, fieldstone Masonry Buildings
Category B:	Brick Construction Masonry Buildings
Category C:	R. C. C. Construction
Category X:	Traditional & Conventional Construction

The buildings of Category A are very weak and may get damaged even due to a lower intensity earthquake. There is a need for detailed assessment of buildings, which are vulnerable and may cause losses to life. Assessment of these buildings will help to evolve a strategy for their retrofitting.

After assessment of vulnerability of buildings the priority for structural mitigation has to be defined. Generally public buildings are given first priority because they are lesser in number and at the time of disaster people can take shelter in these public buildings. Some examples of important buildings are hospitals, clinics, communication buildings, fire and police stations, water supply, cinema halls, meeting halls, schools and cultural buildings such as museums, monuments and temples. The second priority goes to other type of buildings like housing, hostels, offices, warehouses and factories.

- **b.** Construction control: The best protection against earthquake is a strong built environment. The quality of buildings, measured by their seismic resistance is of fundamental importance. Minimum design and construction standards for earthquake and flood resistant structures legislated nationally, are an important step in establishing future minimum levels of protection for important structures. India now has building codes and regulations for seismic and flood resistant design. These codes are in constant review by the experts. The below mentioned building codes are generally practiced in India:
- IS: 1893, 1984 Criteria for earthquake resistance design of structures
- IS: 13828, 1993 Guidelines for improving low strength earthquake resistant masonry buildings
- IS: 13920, 1993 Ductile detailing of reinforced concrete structures subjected to seismic forces- code of practice
- IS: 13827, 1993 Guidelines for improving earthquake resistance of earthen buildings
- IS: 13935, 1993 Guidelines for repairing & seismic strengthening of buildings

In Hoshangabad, building by-laws and the Seismic Code must be enforced by the municipal and panchayat bodies.

#### NON STRUCTURAL:

Land use planning: Damage to a building depends primarily upon the soil conditions and topology of the area. Jamnagar district comes under moderate risk zone in terms of earthquake (Zone 3) and flood disaster. But a part of it is also recommended by DMI to be included under zone 4 of earthquake as it lies on a cross fault Junagadh region.

Training and awareness programmes: Mitigation also includes training of people for making the houses safe from earthquakes and floods. Training modules have to be prepared for different target groups viz. engineers and masons about safe building practices and general 'do's and don'ts' for general public.

# Mitigation strategies

The mitigation strategy for Jamnagar district involves the following elements:

- Further growth of human settlements in the low lying areas should be checked through land-use planning. Such areas are vulnerable not only from flood hazards but are also vulnerable to earthquake liquefaction, which may increase the damage manifold. The department of Town and Country Planning will take care of seismic hazards while preparing the development plans for the district;
- Appropriate building codes will be made applicable for new engineered & non engineered constructions, and should be strictly enforced by local body. The Municipal Corporation of local area will ensure the construction as per Indian Standard Building Codes;
- Infrastructure department will do the retrofitting of public buildings under their maintenance charge. Generally PWD, Rural Engineering Services and Housing Board maintain the public buildings. The expenditure for such retrofitting will be taken care under maintenance head.
- Community awareness will be raised regarding seismic resistant building construction techniques and seismic retrofitting of existing buildings. Housing Board will be the nodal agency to provide training through workshops and demonstrations. PWD and RES will support MPHB in these efforts;
- Community awareness will be raised regarding 'do's and don'ts' in the event of an earthquake with the involvement of Panchayati Raj institutions and CBOs. Revenue department will be the nodal agency for this activity.
- Development schemes:

NREGS: The MGNREGA achieves twin objectives of rural development and employment. The MGNREGA stipulates that works must be targeted towards a set of specific rural development activities such as: water conservation and harvesting, a forestation, rural connectivity, flood control and protection such as construction and repair of embankments, etc. Digging of new tanks/ponds, percolation tanks and construction of small check dams are also given importance. The employers are given work such as land leveling, tree plantation, etc. It has a very broad spectrum which can be used for the benefit of the population that are vulnerable and are likely to be affected.

- 1. Construction of Tube wells can be done.
- 2. Building of Roads for places which are not connected to other parts of the district.
- 3. Leveling of low lying areas during flood to a higher level to prevent those areas.
- 4. Construction of check dams and embankments and drainage systems to prevent flooding of those areas.

# IAY:

This scheme can be used for the rehabilitation of the affected villages by making constructions for the affected population.

# Sarva Shiksha Abhiyan:

This scheme can be used for creating awareness about mitigation and preparedness about accidents that are in control of man, in collaboration with educational institutions to the people so that they can make use of it when required.

#### NRHM:

This scheme can be used to facilitate for voluntary first aid during disaster and training the local population to deal with minor injuries so that they do not have to wait for professional help to help any individual. Training of nurses can be carried out as a preparatory plan.

#### Mukhyamantri Avas yojana:

The scheme can facilitate the rehabilitation programs among the affected villages or the ones that are likely to be affected and lie in the vulnerable zone. They can come up with collaboration with the construction norms.

#### Jal- Abhishekh Abhiyan:

The aim of the scheme is to provide safe drinking water so it can be used to provide for clean drinking water during response and relief period .It can work in collaboration with sanitation systems during relief period and help in avoiding any kind of future epidemics in the affected region.

#### Samagra Swachta Abhiyan:

This scheme can also be used for providing sanitation in the relief camps to the affected population. Since relief camps are the places where lot of diseases and epidemics may break out, proper defecation and sanitation should be ensured by this scheme.

#### Madhyanah Bhojan Karyakram:

The scheme can provide for food supply during emergency situations in the affected areas or even in the relief camps.

#### **JNNURM**

Localization and Project Uday Institutionalization with replication

# • Risk Management Funding

Short term provisions are expected to cover the immediate loss, incurred due to disasters. Whereas long term provisions include the set up of fire stations, watershed management, planting trees along the river etc.

Insurance schemes are important source of funds for restoration of private business enterprises. The Collector will coordinate with Insurance Companies to speed up settlement of insurance claims. It will help in restoration of private business enterprises. He will also coordinate with commercial banks for ensuring smooth flow of financial assistance from commercial banks for restoration of private business enterprises.

Agriculture department shall provide seeds and the required finance as loans through local banks for the resumption of agriculture activities. The district administration shall elicit the support funding of agencies like Care, CRS etc. for the resumption of agriculture and livelihood activities.

Revenue/Book Circulars contains standing instructions of the Government for distribution of ex-gratia payments to poor families, who suffer from disasters to initiate their recovery process. This assistance will be provided very promptly to the poor families by the functionaries of the Revenue Department.

In order to achieve the objectives, rollout workshop was held for sensitization of education department officials, district level administrators (District Education Officers & District Primary Education Officers), teachers and students. Eighty six master trainers were trained in 4 regional workshops, 593 teachers were trained throughout the State in 3 day workshops. Twenty five model schools were selected where 25,543 students and 861 teachers have been

trained. One model school developed for each district. Methodology for School Safety program has been developed and tested, including templates for developing a School Disaster Management Plan. Training and awareness material has been developed. Also, draft text books for class VII, VIII, IX were prepared incorporating the basics of Disaster Management. Over and above the softer issues highlighted above, GSDMA has provided all the existing Government schools in Gujarat with ISI marked portable Water-CO2 type of Fire Extinguisher (31746 Government schools covered of which 31336 are primary and 410 are secondary and higher secondary schools). For the necessary guidance/instruction for use of fire extinguishers, GSDMA has prepared an 18 minute short education film in Gujarati on fire safety for schools. This was shown to all government primary schools through the satellite network.

#### \* Identification of Stake holder involve in disaster management

#### 1. Search & rescue

It is the duty of the DDMA to provide specialized life saving assistance to district and local authorities. In the event of a major disaster or emergency its operational activities include locating, extricating and providing on site medical treatment to victims trapped in collapsed structures. In the event of any disaster the Home Guards along with the support of the Police dept. form teams to locate injured and dead and try to rescue the ones in need. There are other bodies too that help these departments in this work, like the PWD, Health dept, Fire dept and also the people that voluntarily form teams to help the ones in need. Proper training for search and rescue process needs to be undertaken so as to minimize the time taken in rescuing someone. Also proper methodology and resources are needed to carry out a search & rescue mission.

The tactics used in the search & rescue process vary accordingly with the type of disaster that we are dealing with. In case of flood, a boat and trained swimmers are a must while in case of an earthquake sniffer dogs and cutting tools with trained manpower is a binding requirement. The household register that is maintained by the warden should be maintained for every village as it proves to be of great help in case of a disaster like an earthquake. Because in case of the aforementioned disaster people get trapped in the debris of buildings and houses and it becomes difficult to estimate how many people are present in the debris. But if a household register is maintained then the task becomes quite easy and effective to find out almost correctly that how many people would be present in any building/house at any given time. Thus the resources can be justifiably distributed and more lives can be saved. This kind of process is highly recommended in this particular district which lies in moderate earthquake prone region.

For flood it is recommended that the boats that are used should be light weight and the motor should be of 'luma' type, so that it becomes easy for the rescue team to lift the boat and carry it to the spot.

#### • Search & rescue Team

#### S.No. designation of trained S&R Team member

The Search & Rescue team is formed as and when required and the members & equipments are taken according to the nature of the disaster (and also on their availability).

- Police Officers (2 or more)
- Home guards (2 or more)
- Swimmers (In case of flood)
- A construction engineer (From P.W.D.)
- Driver (For Every vehicle)
- Any person with the prior experience of the disaster (From Home Guard/Police Dept.)
- A doctor or nurse or at least a person having first aid training
- A Class IV Officer (Health Dept.)

## 2. Early Warning:

The early warning systems for different disasters should be in place so that the concerned administrative machinery and the communities can initiate appropriate actions to minimize loss of life and property. These should give an indication of the level of magnitude of the mobilization required by the responders. The goal of any warning system is to maximize the number of people who take appropriate and timely action for the safety of life and property. All warning systems start with the detection of the event and with their timely evacuation. Warning systems should encompass three equally important elements viz detection and warning, dissemination of warning down to the community level and the subsequent quick response.

The State acknowledges the crucial importance of quick dissemination of early warning of impending disasters and every possible measure will be taken to utilize the lead-time provided for preparedness measures. As soon as the warning of an impending calamity is received, the EOCs at the State, District and Block levels will be on a state of alert. The Incident Commander will take charge of the EOC and oversee the dissemination of warning to the community. The District Collector will inform the District Disaster Management Committees who will alert the lock and Village level DMCs and DMTs to disseminate the warning to the community. On the basis of assessment of the severity of the disaster, the State Relief Commissioner (Incident Commander) shall issue appropriate instructions on actions to be taken including evacuation to the District Collector will use his own discretion on the preparedness measures for facing the impending disaster.

At the village level, members of the VDMCs and DMTs or village level will coordinate the evacuation procedures to the pre-designated relief centers, taking special care of the vulnerable groups of women, children, old people etc. according to the plans laid down earlier.

### • Evacuation:

Evacuation is a risk management strategy, which may be used as a means of mitigating the effects of an emergency or disaster on a community. It involves the movement of people to a safer location. However, to be effective, it must be correctly planned and executed. The process of evacuation is usually considered to include the return of the affected community. Shelter provides for the temporary respite to evacuees. It may be limited in facilities, but must provide protection from the elements as well as accommodate the basic personal needs, which arise at an individual level in an emergency.

The plan must allocate responsibility for management of each of the elements of shelter. Considering the wide range of services, agencies and issues to be managed, it becomes essential for 'shelter' to be managed within a structure, which facilitates the coordination of agencies and services and support of emergency workers. The following factors may need consideration:

• Identification of appropriate shelter areas based on safety, availability of facilities, capacity and number of victims.

- Approaches to the shelter location in light of disruption due to hazard impact and traffic blockades.
- Temporary accommodation
- Provision of essential facilities like drinking water, food, clothing, communication, medical, electrical and feeding arrangements, etc.
- Security
- Financial and immediate assistance
- First-aid and counseling

# Types of evacuation

For the purpose of planning, all evacuations may be considered to be one of two generic types:

(a) Immediate evacuation, which allows little or no warning and limited preparation time as in the case of earthquakes and air accident.

(b) Pre-warned evacuation resulting from an event that provides adequate warning and does not unduly limit preparation time as in the case of flood and cyclones.

# Principles of Evacuation Planning

- Establishment of a management structure for organization, implementation, coordination and monitoring of the plan.
- Determination of legal or other authority to evacuate.
- Clear definition of rules and responsibilities.
- Development of appropriate and flexible plans.
- Effective warning and information system.
- Promoting awareness and encouraging self-evacuation.
- Assurance of movement capability.
- Building confidence measures and seeking cooperation of the affected community.
- Availability of space for establishment of relief camps having requisite capacity and facilities.
- Priority in evacuation to be accorded to special need groups like women, old and sick, handicapped and children.
- For effective evacuation, organization and running of relief centers, cooperation and involvement of all agencies viz. Community, volunteers, NGOs, NCC / NSS, Home guards and civil defense, district and village bodies be ensured.
- Security arrangement and protection of lives and property.
- Preparation and updating of resource inventories.
- Appropriate welfare measures throughout all stages
- Test exercise of prepared plans and recording of lessons learnt
- Documentation.

# Stages of Evacuation

There are five stages of evacuation as under:

- Decision of authorities to evacuate victims
- Issue of warning and awareness

- Ensuring smooth movement of victims to designated relief camps
- Ensuring provision of all requisite facilities like security, safe-housing, feeding, drinking-water, sanitation, medical and allied facilities
- Safe return of personnel on return of normalcy.

# Decision to Evacuate

Vulnerability analysis may indicate that for certain hazards and under certain conditions, sheltering in place could well be the best protection. Available lead-time may influence the decision to evacuate the public before the impact of emergency (e.g. floods) and reducing the risk to lives and property. Decision would also be dependent on factors like ready availability of suitable accommodation, climatic condition, and severity of likely hazard and time of the day.

The Collector would be the authoritative body to issue directions for evacuation. The OIC of DECR would convey directions to Desk Officers of concerned agencies, which are responsible to execute evacuation.

# Basic consideration for Evacuation

The DCG will define area to be evacuated as also the probable duration of evacuation on the basis of meteorological observations and intimations by the concerned forecasting agencies. It should also identify number of people for evacuation, destination of evacuees, lead-time available, welfare requirements of evacuees as also identify resources to meet the needs of victims, viz. manpower, transport, supplies equipments, communications and security of the evacuated area.

The evacuating agency should set priorities for evacuation in terms of areas likely to be affected and methodology to execute evacuation:

- Delivery of warning
- Transport arrangement
- Control and timing of movement
- Fulfill welfare needs including medical treatment
- Registration of evacuees

All agencies involved in evacuation operation like Home guards, Police, PWD, PHED, etc. will coordinate in field. They will remain in touch with the Desk officials in the DECR for issuing warning, information and advise the public.

# Evacuation Warning

An evacuation warning must be structured to provide timely and effective information. Factors, which may influence the quality and effectiveness of warning, include time, distance, visual evidence, threat characteristic and sense of urgency e.g. the more immediate the threat, the greater the resilience of people to accept and appropriately react to the warning.

The warning should be clear and target specific. The warning statement issued to the community should be conveyed in a simple language. The statement should mentioned:

- The issuing authority, date and time of issue
- An accurate description of likely hazard and what is expected
- Possible impact on population, area to be in undated or affected due to earthquake
- Need to activate evacuation plan
- Do's and Don'ts to ensure appropriate response

## Damage & Loss Assessment

Immediately after the disaster there is an urgent need of damage assessment in terms of loss of life, injury and loss of property. The objectives of damage assessment are to mobilize resources for better rescue and relief, to have detailed information of damage extent and severity of disaster and to develop strategies for reconstruction and restoration facilities.

• Damage is assessed with regard to building stock, standing crops, agricultural area, livestock lost, forest cover decimated, vital installations etc. In damage assessment of building stock, generally three types of flags are used; green, yellow and red. The green colour is given to the buildings that are safe and require 2-3 days to return to their original function. Yellow flags depict the considerable damage to the buildings and considered to be unsafe for living, as they require proper structural repairs and careful investigation. The red flag is assigned to buildings that are partially or completely collapsed. Immediately after a disaster event, damage assessment will be conducted in 2 phases viz. Rapid Damage Assessment and Detailed Damage Assessment.

# **4** <u>Training need analysis -Education and Capacity Building and arrangement</u> <u>for training:-</u>

Although education about disaster mitigation and prevention and capacity building would seem to be ideal district-level efforts, the lead for both probably best rests with the state level, with districts having a facilitating role. The issue is that if 25 districts independently embark on education and capacity building it will be hard to coordinate and standardize the results across districts. A significant consequence would an inequality in capacities across districts, and thus uneven mitigation and prevention results.<sup>5</sup> How to fund these activities remains open. Options range from GSDMA grants to set-asides in budget allocations. Project Impact in the US and similar programs in Australia and Canada are good models for the former approach.

Task	Activity		Responsibility
Training	1. Training to civ	/il defence	Home Dept.
	personal in vario	ous aspect of	
	disaster manage	ement	District Home Guards
	2. Training to ho		Commandant
	personal in vario	ous aspect of	
	disaster management including		Dy.Controller Civil Defence
	search and resc	ue	
3. Training to NCC and NSS perso	onal in various	Education De	p q
aspect of disaster management			
			се
4. Training to educational and trai	ning institutions	DDMC	
personal in various aspect of disa	ster		
management			

# > Training, capacity building and other proactive measures Training:

5. Training to civil society, CBOs and corporate entities in various aspect of disaster management	DDMC
6. Training to fire and emergency service personal in various aspect of disaster management	Fire Dept DDMC
7. Training to police and traffic personal in various aspect of disaster management	DDMC Police Dept.
8. Training to media in various aspect of disaster management	DDMC Information Dept
9. Training to govt. officials in various aspect of disaster management	DDMC
10. Training to engineers, architects, structural engineers, builders and masons in various aspect of disaster management	DDMC

#### > Awareness

Task	Activity	Responsibility	
Information education And	1. Advertisement, hording,	Information Dept.	
communication	booklets, leaflets, banners,	Education Dept.	
	shake-table, demonstration, folk	All line dept.	
	dancing and music, jokes, street	Dist. Collectors	
	play, exhibition, TV Spot, radio	Municipal Commissioners	
	spot, audio-visual and	Other Dist. Authorities	
	documentary, school campaign,		
	- Planning and Design -		
	Execution and Dissemination		

# Activation of Incident Response System in the District and identification of quick response team

#### • Command:

This function establishes the framework within which a single leader or committee can manage the overall disaster response effort. A single Incident Commander is responsible for the successful management of the response during operational period in an area. If the incident grows in size and extends throughout many jurisdictions, multiple incident commanders can be useful with an area command authority may be established to coordinate among the incidents. Incident Commander requires the following Command Staffs to support him, which are as followings,

- Public Information Officer The single media point of contact
- Safety Officer Responsible for identifying safety issues and fixing them, he has the authority to halt an operation if needed.
- Liaison Officer Point of contact for agency to agency issues.

- 1. Operations: this section carries out the response activities described in the IAP along with coordinating and managing the activities taken the responding agencies and officials that are directed at reducing the immediate hazard, protecting lives and properties. This section manages the tactical fieldwork and assigns most of the resources used to respond to the incident. Within operations, separate sections are established to perform different functions, such as emergency services, law enforcement, public works...etc.
- 2. Planning: this section supports the disaster management effort by collecting, evaluating, disseminating, and uses information about the development of the emergency and status of all available resources. This section creates the action plan, often called "Incident Action Plan" (IAP), which shall guide emergency operations/response by objectives. Followings are the six primary activities performed by the planning section, including,
  - Collecting, evaluating, and displaying incident intelligence and information
  - Preparing and documenting IAPs
  - Conducting long-range and contingency planning
  - Developing plans for demobilization
  - Maintaining incident documentation
  - Tracking resources documentation
- 3. Logistics: the process of response includes personnel, equipments, vehicles, facilities...etc, all of which will depend upon the acquisition, transport, and distribution of resources, the provision of food and water, and proper medical attention. The Logistic section is responsible for the mentioned process.
- 4. Finance And Administration: this section is responsible for tracking all costs associated with the response and beginning the process for reimbursement. The finance and administration section becomes very important when the national government provides emergency funds in place that guarantee local and regional response agencies that their activities, supply use, and expenditures will be covered.

A traditional command structure exists in the administrative hierarchy which manages disasters in India. It has been planned to strengthen and professionalise the same by drawing upon the principles of the ICS with suitable modifications. The ICS is essentially a management system to organise various emergency functions in a standardised manner while responding to any disaster. It will provide for specialist incident management teams with an incident commander and officers trained in different aspects of incident management, such as logistics, operations, planning, safety, media management, etc. It also aims to put in place such teams in each district by imparting training in different facets of incident management to district level functionaries. The emphasis will be on the use of technologies and contemporary systems of planning and execution with connectivity to the joint operations room at all levels.

The local authorities do not have the capacity to play an efficient role at local level to support the DEOC's requirements for field information and coordination. The DEOC will therefore need to send its own field teams and through them establish an Incident Command System. The system will comprise:

- Field information collection
- Inter agency coordination at field level
- Management of field operations, planning, logistics, finance and administration

#### Awareness Generation: -

As a part of Preparedness Awareness generation among community will be continous process.From District to Taluka,Village level awareness programme must be conducted.with the help of Print Media,Electronic media,folk media authority can create awareness among community.

#### > NGO and Other stake Holder coordination -

For arrangement of water supply, temporary sanitation facilities, search and Rescue activity, Relief distribution can be sought with help of special agencies, NGOs and CBOs.

#### Seasonal preparedness: -

Whether personal or institutional, all collections are subject to risks that can seriously affect the lifetime and value of a collection. For many museums, galleries, and private collectors, anessential aspect in Collection Management is maintaining a loss prevention plan for seasonal disasters.

Hazards from these storms come in many forms including high winds, tornadoes, storm surges and flooding. Natural disasters make all of us acutely aware of our vulnerabilities to disaster. Fortunately, catastrophes of a large magnitude are rare, but disaster can strike in many ways. Large or small, natural or man-made, emergencies put collections in danger. Hazards can often be mitigated or avoided altogether by a comprehensive, emergency-preparedness plan. Such plans provide a means for recognizing and responding effectively to emergencies. The goal is to hopefully prevent damage or, at least, to limit the extent of the damage.

#### > Identifying Risks

A prudent first step is to list geographic and climatic hazards and other risks that jeopardize building and collections. These could the might include geographicalsusceptibility to hurricanes, tornadoes, flash flooding, earthquakes, or forest fires, and even the possibility of unusual hazards such as volcanic eruptions. Consider man-made disasters such as power outages, sprinkler discharges, fuel or water supply failures, chemical spills, arson, bomb threats, or other such problems. Take note of the environmental risks that surround you. Chemical industries, shipping routes for hazardous materials, and adjacent construction projects all expose you to damage. Any event that is a real possibility should be covered under your Emergency Preparedness Plan. It is also important to determine the vulnerability of the objects within the collections. What types of materials are included? Are they easily damaged? Are they particularly susceptible to certain types of damage such as moisture, fire, breakage, and the like? How and where are collections stored? Are they protected by boxes or other enclosures? Is shelving anchored to structural elements of the building? Is it stable? Are any artifacts stored directly on the floor where they could be damaged by leaks or flooding? All items should be raised at least four inches from the floor on waterproof shelves or pallets. Are materials stored under or near water sources? Analyze your security and housekeeping procedures. Do they expose collections to the dangers of theft, vandalism, or insect infestation Convulnerabilities.

Are yed? Is there a complete and accurate inventory? Is a duplicate of the inventory located at another site? Although there may be a wide range of disaster scenarios, the most common are water, fire, physical or chemical damage, or some combination of these. The specific procedures of a disaster plan focus on the prevention and mitigation of these types of damage.

#### > Decreasing Risks

Once your hazards are specified, the disaster planner should devise a program with concrete goals, identifiable resources, and a schedule of activities for eliminating as many risks as possible. While water damage is the most common form of disaster for collections, everyone needs a good fire-protection system. Wherever possible, collections should also be protected by a firesuppression system. Preservation professionals now recommend wet-pipe sprinklers for most collections. In addition, water misting suppression systems have become available within the last several years; these can provide fire suppression using much less water than conventional sprinkler systems. Before choosing a fire-protection system, be sure to contact a preservation professional or a fire-protection consultant for information about the latest developments in fire protection and for advice appropriate to your collections and situation. An inventory will provide a basic list of holdings, and will be essential for insurance purposes. Improved collection storage, such as boxing and raising materials above the floor level, will reduce or eliminate damage when emergencies occur. Comprehensive security and housekeeping procedures will ward off emergencies such as theft, vandalism, and insect infestation. They will also ensure that fire exits are kept clear and fire hazards eliminated.

#### Identifying Resources

An important step in writing your plan is to identify sources of assistance in a disaster. Research these services thoroughly--it is an essential part of the planning process. These can range from police, fire, and ambulance services to maintenance workers, insurance adjustors, and utility companies. If possible, invite local service providers to visit in order to become familiar with your site plan and collections in advance of an emergency. For example, you may want to provide the fire department with a list of high-priority areas to be protected from water if fire-fighting efforts permit.

Other valuable sources of assistance are local, state, or federal government agencies.

#### Community Warning System

#### **SDRN/IDRN** data updation: -

State disaster Resource network amd India Disaster Resource Network is a cruasil database for response any disaster. SDRN, a decision support tool, is layered using the existing IT Wide Area Network (WAN) of the State - GSWAN. SDRN uses the map-based GeoSpatial Information Systems developed by the Gujarat based organization Bhaskaracharya Institute for Space Applications and Geo-Informatics (BISAG). Currently, the SDRN network is being integrated with the GIS based Decision Support System using Java, MS-Access, Visual Studio 2005 with Database SQL Server 2005. The GIS Visualizer does not require any GIS software. The GIS visualizer contains multi layered options depicting roads-highways, taluka, district boundaries, rivers, ports, airways, etc.

#### India Disaster Resource Network (IDRN) : -

IDRN, a web based information system, is a platform for managing the inventory of equipments, skilled human resources and critical supplies for emergency response. The primary focus is to enable the decision makers to find answers on availability of equipments and human resources required to combat any emergency situation. This database will also enable them to assess the level of preparedness for specific vulnerabilities. Total 226 technical items listed in the resource inventory. It is a nationwide district level resource database. Each user of all districts of the state has been given unique username and password through which they can perform data entry, data updation on IDRN for resources available in their district. The IDRN network has functionality of generating multiple query options based on the specific equipment, skilled human resources and critical supplies with their location and contact details.

#### **DRM Programme: -**

#### i) GSDMA DRM activities:

Disaster Risk Management Programme (DRM) has taken strong roots at various levels of administration in Gujarat. The Department of Revenue & Disaster Management is the nodal Department in Government of Gujarat that handles the subject with GSDMA.Disaster Management Committees are formed at various levels and are assigned the taskof implementing the programme. Representation for these committees are drawn from elected representatives, officials of line departments, professional bodies, Civil Defence, NGO and CBO representatives and local opinion leaders. Major Activities are being carried out under DRM program are Plan Development at Various Levels, Emergency Resources Database maintain through SDRN / IDRN, Capacity Building through Trainings & Resource Mobilization, Disaster Awareness through Orientations, Campaigning, Media Management and IEC distribution. Coordinate District Administration for all Disaster Management Activities with expertise knowledge, logistics and fund allocation.

The Disaster Risk Management Program (DRM) being implemented by Gujarat State Disaster Management Authority (GSDMA) aims to strengthen the response, preparedness and mitigation measures of the community, local self-governments, the District administration and the State in Gujarat. Under the DRM Programme

#### **For the Prepared level specific plan following process will followed.**

## **<u> District Level Process</u>**

- 2. Orientation of District level officers and PRI members including line department officials
- 3. Formation of District Disaster Management Committee.
- 4. Development of manuals and guidelines Capacity building of DDMC members, government officials, training institutes, other concerned organizations at district level
- 5. Development of the District Disaster Management Plan
- 6. Use of IEC materials for awareness generation for preparedness, risk reduction and mitigation
- 7. Data updation on IDRN

#### Taluka level process

- Orientation cum sensitize Taluka level officers and PRI members.
- Formation of Taluka Disaster Management Committee.

- Capacity building of government officials
- Development of the TDMP
- Use of IEC material and media sources for create awareness at taluka level
- TDMP update on SDRN

# 4 <u>City-ULB level process</u>

- 1) Orientation of City level officers, elected members & leaders.
- 2) Formation of CDMP
- 3) Capacity building of municipal official and concerned organizations at city level
- 4) Development of the CDMP.
- 5) Use of IEC material for create awareness at city level
- 6) CDMP updation on SDRN

# 4 Village Level Process

- Formation Cluster within 10 to 12 village and conduct cluster meetings over 10-12 villages
- Organize gramsabha in each village
- Undertake PRA exercise at village level for hazard, vulnerability assessment and resource analysis
- Facilitate the formation of the Village Disaster Management Committee (VDMC)
- Conduct training programs for DMT and DMC Members and volunteers
- Awareness campaigns on risk reduction mechanisms, Risk Transfer- insurance, disaster resistant construction
- Developed Village Disaster Management Plan (VDMP)
- Conduct mock drills for test the VDMP
- Update VDMP twice in a year (by VDMC)

Devbhumi Dwarka district had taken the preparedness measures from village level to District level. at the villages village Task forces was formed and trained about First aid and Health, Search and Rescue and Disaster Management. Some volunteers were also trained in Disaster Management and plans like VDMP were prepared and updated. officers reviewed the disaster preparedness of the villages and interacted with the Village level Disaster Management team members, In the pre-monsoon meeting all departments, and stake holders were asked to get prepared departmental plan. SOP's were also discussed with them so that quick response can be assured and any kind of risk due to water lodging, flood, heavy rainfall and dam overflow can be reduced. Prevention and Mitigation and preparedness 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 a risk reduction. Base on the interim assessment of risk and vulnerabilities, certain majors for mitigation, preparedness and prevention has been taken with respect to Devbhumi Dwarka District. These are The proposed state-level disaster-planning format sets out priorities for mitigation, prevention and preparedness activities. The underlying concept is to incorporate these three types of activities into normal (developmental) policies, procedures and undertakings and targeting specific areas for concerted effort.

Complementary priorities, plans and activities need to be established at the district level. This process is complicated by five realities:

- 1. Developmental policies and budgets are set at the state-level and project implementation is not always under the control of district authorities
- 2. District authorities have limited policy and funding independence.
- 3. The range of possible mitigation, prevention and preparedness actions within a district is significant but can be difficult to prioritize.
- 4. Many activities require popular participation and should be focus on the family or community, which requires time and effort to effectively organize.
- 5. The local commercial sector is cost-conscious and tends to avoid investments in activities which do not immediately improve profits.

A set of possible district-level approaches to mitigation, prevention and preparedness are summarized below based on these realities. These approaches need to be reviewed at the district and state level and. to the degree possible, harmonized vertically within the government structure and across public and private sector organizations and districts. At the same time, the focus of efforts can vary between and even within districts depending on their particular hazards, risks and vulnerabilities<sup>3</sup>.

One approach to developing this harmonization is to hold a state-district conference on mitigation, preparedness and prevention, complemented by annual review workshop. The initial conference would define and harmonize policies, procedures and approaches vertically and horizontally. The workshop would serve to recognize progress and adjust plans to take into account changing local and state-level conditions.

# **4** District-level Approaches to Mitigation, Prevention and Preparedness

# **4** Preventive measure (for all disasters)

Preventive actions have 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 a risk reduction. The district can avail itself of four mechanisms (singularly or together) to reduce risk and vulnerability;

1. Long term planning for mitigation, preparedness and prevention investments in the district,

2. Enforcement of regulations, particularly Structural-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, and,

4. Capacity building, including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability.

The Collector, assisted by the District Development Officer, is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above. Base on the interim assessment of risk and vulnerabilities, the Devbhumi Dwarka District will focus on the following areas for mitigation, preparedness and prevention;

- Reduction in disastmpact on health care facilities, schools and roads
- Vulnerability reduction in flood-prone areas
- Vulnerability reduction to high winds
- Improvement of off-site Preparedness near Industrial sites.

## **Witigation measure (for all disasters)**

1) Town and Country Planning Acts and their related provisions:

The Department of Disaster Management, being a member of all regulatory bodies will coordinate with the Town & Country Planning Board and constitute a committee of experts to evaluate the provisions of the State Town & Country Planning Act in place. The Committee will consist of experts from the fields of disaster management, town and country planning and legal experts and will be chaired by the State Relief Commissioner.

# **4** Zoning Regulations and their related provisions:

The State Urban Development Department, in consultation with the Department of Disaster Management will constitute a committee of experts with members from the Institute of Town Planners,town development, State Pollution Control Board, Chairpersons of major Development Authorities/Notified Area Authorities, eminent faculty from planning, architecture and civil engineering departments of engineering colleges, eminent resource persons and such other experts nominated from time to time to study the existing zoning regulations and suggest necess aryamendments to incorporate components for vulnerability reduction. The State Chief Town Planner will be the Convener of the Committee.

#### **4** Development Control regulations:

The same committee of experts constituted to evaluate the zoning regulations will also evaluate the development control regulations and suggest measures to incorporate the disaster management concerns into them.

#### **4** Government-sponsored programmes and schemes:

The State Planning Department will prepare a report on the government sponsored programmes and schemes running in the State and how far each programme/scheme addresses the issue of disaster management and submit to the government. The Disaster Management Group which is constituted under the chairmanship of the Chief Secretary with concern Secretaries of the Departments of Disaster Management, Urban Development, Rural Development, Health, Home, Finance, Science & Technology, Transport, and Agriculture to evaluate and suggest disaster mitigation measures to be incorporated.

# Community Warning system-Early Warning System (EWS)

It is often observed that communities living in remote and isolated locations do not receive timely and reliable warnings of impending disasters. Hence, it is necessary to have robust and effective early warning systems, which can play crucial role in saving lives and limiting the extent of damage to assets and services. Outreach and reliability of warnings are key factors for planning and implementing response measures. Post disaster advisories like information on rescue, relief and other services are important to ensure law, order, and safety of citizens.

# > During and Post Disaster Advisory Action Plan:

Type of Hazard	Flood	Cyclone	Earthquake	Drought	Chemical and industrial accidents	Tsunami	
Responsible Agency	DDMC,Mamlatdar office & TDO						
Villages covered	All risk prone villages						
Villages/habitation not covered or difficult to access	communities in remote locations (fisher folk, salt pan workers, Maldharis etc)						
Measures required for outreach	Contact of communities in remote locations (fisher folk, salt pan workers, Maldharis etc)						

The State Government has established an effective system of collaborating with the media during emergencies. At the State Emergency Operation Centre (SEOC), a special media cell has been created which is made operational during emergencies. Both print and electronic media is regularly briefed at predetermined time intervals about the events as they occur and the prevailing situation on ground. A similar set up is also active at the District Emergency Operation Centre (DEOC).

# Chapter: 6 Response Measures-Multi Hazard

Response measures are those which are taken instantly prior to, and following, a disaster aimed at limiting injuries, loss of life and damage to property and the environment and rescuing those who are affected or likely to be affected by disaster. Response process begins as soon as it becomes apparent that a disastrous event is imminent and lasts until the disaster is declared to be over. Since response is conducted during periods of high stress in a highly time-constrained environment and with limited information and recourses (in majority of the cases), it is by far, the most complex of four functions of disaster management. Response includes not only those activities that directly address the immediate needs, such as search and rescue, first aid and shelters, but also includes systems developed to coordinate and support such efforts. For effective response, all the stakeholders need to have a clear perception/vision about hazards, its consequences and actions that need to be taken in the event of it. The Revenue Department of the State is the Nodal Department for controlling, monitoring and directing measures for organizing rescue, relief and rehabilitation. All other concerned line departments should extend full cooperation in all matters pertaining to the response management of the disaster whenever it occurs. The District EOC, ERCs and other control rooms at the District level should be activated with full strength.

## Alert Mechanism – Early Warning :

On the receipt of warning or alert from any such agency which is competent to issue such a warning, or on the basis of reports from District Collector of the occurrence of a disaster, the response structure of the State Government will be put into operation. The Chief Secretary/Relief Commissioner will assume the role of the Chief of Operations during the emergency situation. The details of agencies competent enough for issuing warning or alert pertaining to various types of disasters are given below;

Disaster	Agencies
Earthquakes	IMD/ISR
Floods	Meteorological Department, Irrigation
TSuanmis	IMD/ISR/INCOIS
Cyclones	IMD
Epidemics	Public Health Department
Road Accidents	Police
Industrial and Chemical Accidents	DISH, Police, Collector
Drought	Agriculture
Fire	Fire Brigade, Police, Collector
Rail Accident	Railways, Police, Collector
Air Accident	Police, Collector, Airlines
Ammunition Depot-Fire	Army, Police, Collector.

#### District CMG meeting

At the District level, the District Crisis Management Group (DCG) is an apex body to deal with major chemical accidents and to provide expert guidance for handling them. DCG has a strength of 34 members which includes District Collector, SDM and Dy. Collector, DDO, Dy. Director – Industrial Safety & Health, DSP, PI, Fire Superintendent of the City Corporations or important Municipalities, Chief District Health Officer, Civil Surgeon, SE, Chief Officer, Dy. Chief Controller of Explosives, Commandant – SRPF, Group-I, Dy. Director – Information to name a few. At Taluka level Local Crisis Management Group (LCG) is formed for coordination of activities and executing the operations.DCGs as well as LCG. Meeting will meet periodiccaly twice in a year.

#### Activation of EOC

Emergency Operation Center (EOC) is a physical location and normally includes the space, facilities and protection necessary for communication, collaboration, coordination and emergency information management.

The EOC is a nodal point for the overall coordination and control of relief work. In case of an L1 Disaster the The Local Control room will be activated, in case of an L2 disaster DEOC will be activated along inform with the SEOC.

## Role & Responsibilities of each department.

• Each Department and Govt. agency involved in Disaster Mgmt and Mitigation will :

1. Designate a Nodal officer for emergency response and will act as the contact person for that department/agency.

2. Ensure establishment of fail-safe two-way communication with the state, district and other emergency control rooms and within the organization.

3. Emphasis on communication systems used regularly during LO with more focus on the use of VHFs with automatic repeaters, mobile phones with publicized numbers, VHF radio sets etc. It should be remembered that SAT phones fail during prolonged emergencies and electric failure if the phones cannot be re-charged.

4. Work under the overall supervision of the IC / the District Collectors during emergencies.

# **4** Other Departmental plan incorporated in DMRP

## 1. Agriculture

## 0.1 **Prevention Activities:**

1. Aawareness generation regarding various plant diseases, alternate cropping practices in Disaster-prone areas, Crop Insurance, provision of credit facilities, proper storage of seeds, etc.

2. Hazard area mapping (identification of areas endemic to pest infections, drought, flood, and other hazards).

3. Develop database village-wise, crop-wise, irrigation source wise, insurance details, credit etc.

4. Regular monitoring at block level; the distribution and variation in rainfall. Prepare the farmers and department officers to adopt contingency measures and take up appropriate course of action corresponding to the different emerging conditions.

5. Detail response manuals to be drawn up for advising the farmers for different types of disasters, e.g., rain failure in July or September & development of a dynamic response plan taking into account weekly rainfall patterns.

6. Develop IEC materials to advise the farming communities on cropping practices and precautionary measures to be undertaken during various disasters.

7 Improving irrigation facilities, watershed management, soil conservation and other soil, water and fertility management

8. Measures keeping in mind the local agro climatic conditions and the proneness of the area to specific hazards.

9. Promotion of alternative crop species and cropping patterns keeping in mind the vulnerability of areas to specific hazards.

10. Surveillance for pests and crop diseases and encourage early reporting.

11. Encourage promotion of agro service outlets/enterprise for common facilities, seed and agro input store and crop insurance.

### 0.2 Preparedness Activities before disaster seasons

1. Review and update precautionary measures and procedures, especially ascertain that adequate stock of seeds and other agro inputs are available in areas prone to natural calamities.

2. Review the proper functioning of rain gauge stations, have stock for immediate replacement of broken / non-functioning gadgets/equipments, record on a daily basis rainfall data, evaluate the variation from the average rainfall and match it with the rainfall needs of existing crops to ensure early prediction of droughts.

#### 0.3 **Response Activities:**

- Management of control activities following crop damage, pest infestation and crop disease to minimize losses.
- Collection, laboratory testing and analysis of viruses to ensure their control and eradication.
- Pre-positioning of seeds and other agro inputs in strategic points so that stocks are readily available to replace damage caused by natural calamities.
- Rapid assessment of damage to soil, crop, plantation, irrigation systems, drainage, embankment, other water bodies and storage facilities and the requirements to salvage, replant, or to compensate and report the same for ensuring early supply of seeds and other agro inputs necessary for re-initiating agricultural activities where crops have been damaged.
- Establishment of public information centers with appropriate and modern means of communication, to assist farmers in providing information regarding insurance, compensation, repair of agro equipments and restarting of agricultural activities at the earliest.

#### 0.4 Recovery Activities

1. Arrange for early payment of compensation and crop insurance dues.

2. Facilitate provision of seeds and other agro inputs.

3. Promotion of drought and flood tolerant seed varieties.

4. Review with the community, the identified vulnerabilities and risks for crops, specific species, areas, which are vulnerable to repetitive floods, droughts, other natural hazards, water logging, increase in salinity, pest attacks etc. and draw up alternative cropping plans to minimize impacts to various risks.

5. Facilitate sanctioning of soft loans for farm implements.

- 6. Establishment of a larger network of soil and water testing laboratories.
- 7. Establishment of pests and disease monitoring system.

8. Training in alternative cropping techniques, mixed cropping and other agricultural practices which will minimize crop losses during future disasters.

## 1. Health Department

## 1.1. Disaster Events

## > Prevention Activities:

- Assess preparedness levels at State, District and Block levels.
- Identification of areas endemic to epidemics and natural disasters.
- Identification of appropriate locations for testing laboratories.
- Listing and networking with private health facilities.
- Developing a network of volunteers for blood donation with blood grouping data.
- Strengthening of disease surveillance, ensuring regular reporting from the field level workers (ANMs/LHV etc) and its compilation and analysis at the PHC and District levels, on a weekly basis (daily basis in case of an epidemic or during natural disasters), forwarding the same to the State Disease Surveillance Cell and monthly feedback from the State to the district and from the District to the PHC.
- Formation of adequate number of mobile units with trained personnel, testing facilities, communication systems and emergency treatment facilities.
- Identification of locations in probable disaster sites for emergency operation camps.
- Awareness generation about various infectious diseases and their prevention.
- Training and IEC activities
- Training of field personnel, Traditional Birth Attendants, community leaders, volunteers, NGOs and CBOs in first aid, measures to be taken to control outbreak of epidemics during and after a disaster, etc.
- Arrangement of standby generators for every hospitals.
- Listing of vehicles, repair of departmental vehicles that will be requisitioned during emergencies for transport of injured.

## \* Preparedness Activities before Disaster Seasons

## > For heat wave :

- Preparation and distribution of IEC materials, distribution of ORS and other lifesaving drugs, training of field personnel on measures to be taken for management of patients suspected to be suffering from heatstroke;
- For flood and cyclone : Assessment and stock pilling of essential medicines, anti snake venom, halogen tablets, bleaching powders. ORS tablets, Pre-positioning of mobile units at vulnerable and strategic points.

- Response activities:
- Stock piling of life-saving drugs, detoxicants, anesthesia, Halogen tablets in vulnerable areas.
- Strengthening of drug supply system with powers for local purchase during Level-0.
- Situational assessment and reviewing the response mechanisms in known vulnerable pockets.
- Ensure adequate availability of personnel in disaster sites.
- Review and update precautionary measures and procedures.
- Sanitation
- Dispensing with post-mortem activities during L1, L2 and L3 when the relatives and/or the competent authority are satisfied about cause of death.
- Disinfections of water bodies and drinking water sources.
- Immunization against infectious diseases.
- Ensure continuous flow of information.
- Recovery Activities
- Continuation of disease surveillance and monitoring.
- Continuation of treatment, monitoring and other epidemic control activities till the situation is brought under control and the epidemic eradicated.
- Trauma counseling.
- Treatment and socio-medical rehabilitation of injured or disabled persons.
- Immunization and nutritional surveillance.
- Long term plans to progressively reduce various factors that contribute to high level of vulnerability to diseases of population affected by disasters.

## 2.2 Epidemics

#### > Preventive Activities:

- Supply of safe drinking water, water quality monitoring and improved sanitation.
- Vector Control programme as a part of overall community sanitation activities.
- Promotion of personal and community latrines.
- Sanitation of sewage and drainage systems.
- Development of proper solid waste management systems.
- Surveillance and spraying of water bodies for control of malaria.
- Promoting and strengthening Primary Health Centres with network of paraprofessionals to improve the capacity of surveillance and control of epidemics.
- Establishing testing laboratories at appropriate locations to reduce the time taken for early diagnosis and subsequent warning.
- Establishing procedures and methods of coordination with the Health Department, other local authorities/departments and NGOs to ensure that adequate prevention and preparedness measures have been taken to prevent and / or minimise the probable outbreak of epidemics.
- Identification of areas prone to certain epidemics and assessment of requirements to control and ultimately eradicate the epidemic.

- Identification of appropriate locations and setting up of site operation camps for combating epidemics.
- Listing and identification of vehicles to be requisitioned for transport of injured animals.
- Vaccination of the animals and identification of campsites in the probable areas.
- Promotion of animal insurance.
- Tagging of animals
- Arrangement of standby generators for veterinary hospitals.
- Provision in each hospital for receiving large number of livestock at a time.
- Training of community members in carcasses disposal.
- Preparedness activities before disaster seasons
- Stock piling of water, fodder and animal feed.
- Pre-arrangements for tie-up with fodder supply units.
- Stock-piling of surgical packets.
- Construction of mounds for safe shelter of animals.
- Identification of various water sources to be used by animals in case of prolonged hot and dry spells.
- Training of volunteers & creation of local units for carcass disposal.
- Municipalities / Gram Panchayats to be given responsibility for removing animals likely to become health hazards.
- Response Activities:
- Control of animal diseases, treatment of injured animals, Protection of lost cattle.
- Supply of medicines and fodder to affected areas.
- Ensure adequate availability of personnel and mobile team.
- Disposal of carcasses ensuring proper sanitation to avoid outbreak of epidemics.
- Establishment of public information centre with a means of communication, to assist in providing an organized source of information.
- Mobilizing community participation for carcass disposal.
- Recovery Activities:
- Assess losses of animals assets and needs of persons and communities.
- Play a facilitating role for early approval of soft loans for buying animals and ensuring insurance coverage and disaster proof housing or alternative shelters/ mounds for animals for future emergencies.
- Establishment of animal disease surveillance system.

## 2. Water Supplies and Sanitation (GWSSB)

- > Prevention Activities:
- Provision of safe water to all habitats.
- Clearance of drains and sewerage systems, particularly in the urban areas.
- Assess preparedness level.
- Annual assessment of danger levels & wide publicity of those levels.
- Identify flood prone rivers and areas and activate flood monitoring mechanisms.
- Provide water level gauge at critical points along the rivers, dams and tanks.
- Identify and maintain of materials/tool kits required for emergency response.

• Stock-pile of sand bags and other necessary items for breach closure at the Panchayat level.

- Preparedness Activities for disaster seasons
- Prior arrangement of water tankers and other means of distribution and storage of water.
- Prior arrangement of stand-by generators.
- Adequate prior arrangements to provide water and halogen tablets at identified sites to used as relief camps or in areas with high probability to be affected by natural calamities.
- Raising of tube-well platforms, improvement in sanitation structures and other infrastructural measures to ensure least damages during future disasters.
- Riser pipes to be given to villagers.
- Response Activities:
- Disinfections and continuous monitoring of water bodies.
- Ensuring provision of water to hospitals and other vital installations.
- Provision to acquire tankers and establish other temporary means of distributing water on an emergency basis.
- Arrangement and distribution of emergency tool kits for equipments required for dismantling and assembling tube wells, etc.
- Carrying out emergency repairs of damaged water supply systems.
- Disinfection of hand pumps to be done by the communities through prior awareness activities & supply of inputs.
- Monitoring flood situation.
- Dissemination of flood warning.
- Ensure accurate dissemination of warning messages to GPs & Taluka with details of flow.
- Monitoring and protection of irrigation infrastructures.
- Inspection of bunds of dams, irrigation channels, bridges, culverts, control gates and overflow channels.
- Inspection and repair of pumps, generator, motor equipments, station buildings.
- Community mobilisation in breach closure
- Recovery Activities:
- Strengthening of infrastructure.
- Sharing of experiences and lessons learnt.
- Training to staff, Review and documentation.
- Development of checklists and contingency plans.
- Strengthening of infrastructure and human resources.
- Review and documentation.
- Sharing of experiences and lessons learnt.
- Training of staff.
- Development of checklists and contingency plans.

## 3. Police:

• Prevention Activities:

- Keep the force in general and the RAF in particular fighting fit for search, rescue, evacuation and other emergency operations at all times through regular drills.
- Procurement and deployment of modern emergency equipments while modernizing existing infrastructure and equipments for disaster response along with regular training and drills for effective handling of these equipments.
- Focus on better training and equipments for RAF for all types of disasters.
- Rotation of members of GSDRAF so that the force remains fighting fit.
- Ensure that all communication equipments including wireless are regularly functioning and deployment of extra wireless units in vulnerable pockets.
- Ensure inter changeability of VHF communication sets of police and GSDMA supplied units, if required.
- Keeping close contact with the District Administration & Emergency Officer.
- Superintendent of Police be made Vice Chairperson of District Natural Calamity Committee.
- Involvement of the local army units in response planning activities and during the preparation of the contingency plans, ensure logistics & other support to armed forces during emergencies.
- Response Plan:
- Security arrangements for relief materials in transit and in camps etc.
- Senior police officers to be deployed in control rooms at State & district levels during L 1 level deployment onwards.
- Deploy personnel to guard vulnerable embankments and at other risk points.
- Arrangement for the safety.
- Coordinate search, rescue and evacuation operations in coordination with the administration
- Emergency traffic management.
- Maintenance of law and order in the affected areas.
- Assist administration in taking necessary action against hoarders, black marketers etc.

## 4. Civil Defence:

## • Prevention Activities

- Organize training programmes on first-aid, search, rescue and evacuation.
- Preparation and implementation of first aid, search and rescue service plans for major public events in the State.
- Remain fit and prepared through regular drills and exercises at all times.

## • Response Activities

- Act as Support agency for provision of first aid, search and rescue services to other emergency service agencies and the public.
- Act as support agency for movement of relief.
- Triage of casualties and provision of first aid and treatment.
- Work in co-ordination with medical assistance team.
- Help the Police for traffic management and law and order.

## 5. Fire Services:

- Prevention Activities:
- Develop relevant legislations and regulations to enhance adoption of fire safety measures.
- Modernization of fire-fighting equipments and strengthening infrastructure.
- Identification of pockets, industry, etc. which highly susceptible to fire accidents or areas, events which might lead to fires, building collapse, etc. and educate people to adopt safety measures. Conduct training and drills to ensure higher level of prevention and preparedness.
- Building awareness in use of various fire protection and preventive systems.
- Training the communities to handle fire emergencies more effectively.
- VHF network for fire services linked with revenue & police networks.
- Training of masons & engineers in fireproof techniques.
- Making clearance of building plans by fire services mandatory.
- Response Activities:
- Rescue of persons trapped in burning, collapsed or damaged buildings, damaged vehicles, including motor vehicles, trains and aircrafts, industries, boilers, trenches & tunnels.
- Control of fires and minimizing damages due to explosions.
- Control of dangerous or hazardous situations such as oil, gas and hazardous materials spill.
- Protection of property and the environment from fire damage.
- Support to other agencies in the response to emergencies.
- Investigation into the causes of fire and assist in damage assessment.

## 6. Civil Supplies:

- Preventive Activities
- Construction and maintenance of storage godowns at strategic locations.
- Stock piling of food and essential commodities in anticipation of disaster.
- Take appropriate preservative methods to ensure that food and other relief stock are not damaged during storage, especially precautions against moisture, rodents and fungus infestation.
- Response Activities
- Management of procurement
- Management of material movement
- Inventory management
- Recovery Activities
- Conversion of stored, unutilised relief stocks automatically into other schemes like Food for Work. Wherever, it is not done leading to damage of stock, it should be viewed seriously.

## 7. Public Works/ Rural Development Departments

- Prevention Activities :
- Keep a list of earth moving and clearing vehicles / equipments (available with Govt. Departments, PSUs, and private contractors, etc.) and formulate a plan to mobilise those at the earliest.
- Inspection and emergency repair of roads/ bridges, public utilities and buildings.
- Response Activities
- Clearing of roads and establish connectivity. Restore roads, bridges and where necessary make alternate arrangements to open the roads to traffic at the earliest.

- Mobilisation of community assistance for clearing blocked roads.
- Facilitate movement of heavy vehicles carrying equipments and materials.
- Identification and notification of alternative routes to strategic locations.
- Filling of ditches, disposal of debris, and cutting of uprooted trees along the road.
- Arrangement of emergency tool kit for every section at the divisional levels for activities like clearance (power saws), debris clearance (fork lifter) and other tools for repair and maintenance of all disaster response equipments.
- Recovery Activities:
- Strengthening and restoration of infrastructure with an objective to eliminate the factor(s) which caused the damage.
- Sharing of experiences and lessons learnt.
- Training to staff, Review and documentation.
- Development of checklists and contingency plans.

## 8. Energy:GEB

## • Prevention Activities:

- Identification of materials/tool kits required for emergency response.
- Ensure and educate the minimum safety standards to be adopted for electrical installation and equipments and organise training of electricians accordingly.
- Develop and administer regulations to ensure safety of electrical accessories and electrical installations.
- Train and have a contingency plan to ensure early electricity supply to essential services during emergencies and restoration of electric supply at an early date.
- Develop and administer code of practice for power line clearance to avoid electrocution due to broken / fallen wires.
- Strengthen high-tension cable towers to withstand high wind speed, flooding and earthquake, modernise electric installation, strengthen electric distribution system to ensure minimum damages during natural calamities.
- Conduct public/industry awareness campaigns to prevent electric accidents during normal times and during and after a natural disaster.
- Response Activities:
- Disconnect electricity after receipt of warning.
- Attend sites of electrical accidents and assist in undertaking damage assessment.
- Stand-by arrangements to ensure temporary electricity supply.
- Prior planning & necessary arrangements for tapping private power plants like those belonging to ICCL, NALCO, RSP during emergencies to ensure uninterrupted power supply to the Secretariat, SRC, GSDMA, Police Headquarters, All India Radio, Doordarshan, hospitals, medical colleges, Collectorate Control Rooms and other vital emergency response agencies. v Inspection and repair of high tension lines /substations/transformers/poles etc.
- Ensure the public and other agencies are safeguarded from any hazards, which may have occurred because of damage to electricity distribution systems.
- Restore electricity to the affected area as quickly as possible.
- Replace / restore of damaged poles/ salvaging of conductors and insulators.

## 9. Fisheries:

## • Prevention Activities

- Registration of boats and fishermen.
- Building community awareness on weather phenomena and warning system especially on Do's and Don'ts on receipt of weather related warnings.
- Assist in providing life saving items like life jackets, hand radios, etc.
- Certifying the usability of all boats and notifying their carrying capacities.
- Capacity building of traditional fishermen and improvisation of traditional boats which can be used during emergencies.
- Train up young fishermen in search & rescue operation and hire their services during emergency.

## Response Activities

- Ensure warning dissemination to fishing communities living in vulnerable pockets.
- Responsible for mobilizing boats during emergencies and for payment of wages to boatmen hired during emergencies.
- Support in mobilization and additional deployment of boats during emergencies.
- Assess the losses of fisheries and aquaculture assets and the needs of persons and communities affected by emergency.

## • Recovery Activities

• Provide compensations and advice to affected individuals, community.

## **10.** Forest Department

## • Prevention activities

- Promotion of shelter belt plantation.
- Publishing for public knowledge details of forest cover, use of land under the forest department, the rate of depletion and its causes.
- Keep saws (both power and manual) in working conditions.
- Provision of seedling to the community and encouraging plantation activities, promoting nurseries for providing seedlings in case of destruction of trees during natural disasters.

## **11. Transport Department:**

## Prevention Activities

- Listing of vehicles which can be used for emergency operation.
- Safety accreditation, enforcement and compliance.
- Ensuring vehicles follow accepted safety standards.
- Build awareness on road safety and traffic rules through awareness campaign, use of different IEC strategies and training to school children.
- Ensure proper enforcement of safety regulations Response Activities.
- Requisition vehicles, trucks, and other means of transport to help in the emergency operations.
- Participate in post impact assessment of emergency situation.
- Support in search, rescue and first aid.

- Cooperate and appropriation of relief materials.
- Recovery Activities
- Provision of personal support services e.g. Counselling.
- Repair/restoration of infrastructure e.g. roads, bridges, public amenities.
- Supporting the GPs in development of storage and in playing a key role and in the coordination of management and distribution of relief and rehabilitation materials.
- The G.P. members to be trained to act as an effective interface between the community, NGOs, and other developmental organizations.
- Provide training so that the elected representatives can act as effectives supportive agencies for reconstruction and recovery activities.

#### 13. Panchayati Raj:

- Preventive Activities
- Develop prevention/mitigation strategies for risk reduction at community level.
- Training of elected representatives on various aspects of disaster management.
- Public awareness on various aspects of disaster management.
- Organize mock drills.
- Promote and support community-based disaster management plans.
- Support strengthening response mechanisms at the G.P. level (e.g., better communication, local storage, search & rescue equipments, etc.).
- Clean drainage channels, trimming of branches before cyclone season.
- Ensure alternative routes/means of communication for movement of relief materials and personnel to marooned areas or areas likely to be marooned.
- Assist all the government departments to plan and prioritise prevention and preparedness activities while ensuring active community participation.
- Response Activities
- Train ups the G.P. Members and Support for timely and appropriate delivery of warning to the community.
- Clearance of blocked drains and roads, including tree removal in the villages.
- Construct alternative temporary roads to restore communication to the villages.
- PRIs to be a part of the damage survey and relief distribution teams to ensure popular participation.
- Operationalise emergency relief centers and emergency shelter.
- Sanitation, drinking water and medical aid arrangements.
- IEC activities for greater awareness regarding the role of trees and forests for protection during emergencies and also to minimize environmental impact which results owing to deforestation like climate change, soil erosion, etc.
- Increasing involvement of the community, NGOs and CBOs in plantation, protection and other forest protection, rejuvenation and restoration activities.
- Plan for reducing the incidence, and minimize the impact of forest fire.
- Response Activities :
- Assist in road clearance.
- Provision of tree cutting equipments.
- Units for tree cutting and disposal to be put under the control of GSDMA, SRC, Collector during L1
- Provision of building materials such as bamboos etc for construction of shelters.
- Recovery Activities :
- Take up plantation to make good the damage caused to tree cover.

## 14. Information & Public Relations Department

- Prevention Activities
- Creation of public awareness regarding various types of disasters through media campaigns.
- Dissemination of information to public and others concerned regarding do's and don'ts of various disasters
- Regular liaisoning with the media.
- Response Activities
- Setting up of a control room to provide authentic information to public regarding impending emergencies.
- Daily press briefings at fixed times at district level to provide official version.
- Media report & feedback to field officials on a daily basis from L1 onwards.
- Keep the public informed about the latest emergency situation (area affected, lives lost, etc).
- Keep the public informed about various post-disaster assistances and recovery programmes.

## **15. Revenue Department**

- Co-ordination with Govt. of Gujarat Secretariat and Officers of Govt. of India
- Overall control & supervision
- Damage assessment, finalization of reports and declaration of L1/L2 disasters
- Mobilization of finance

## **16. Home Department**

- Requisition, deployment and providing necessary logistic support to the armed forces.
- Provide maps for air dropping, etc.

## **17. Gujarat Disaster Rapid Action Force**

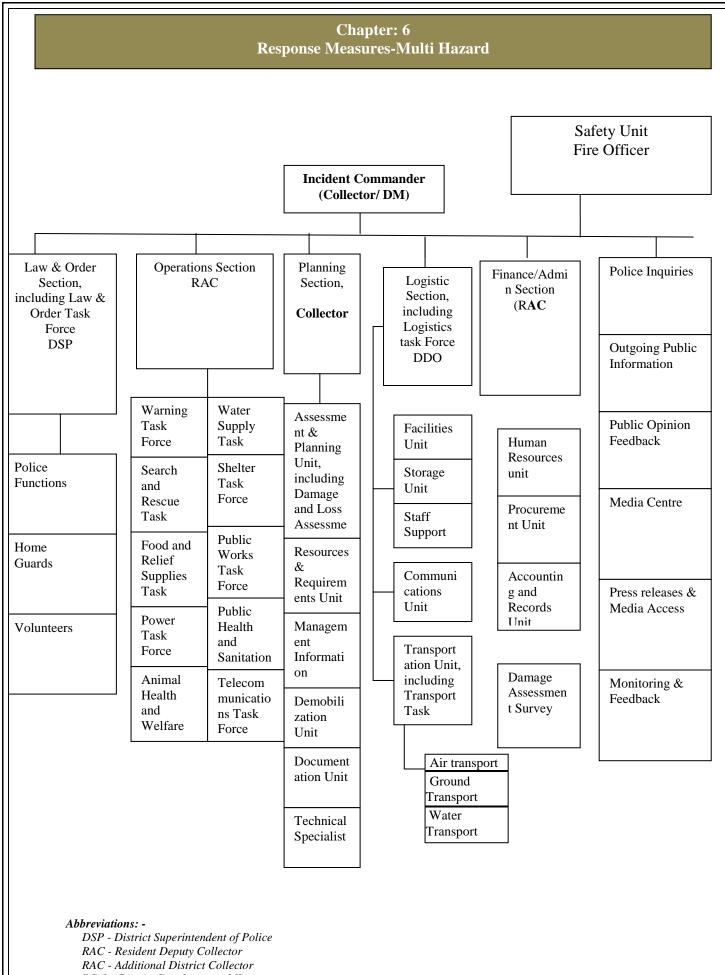
## • Response

- To be trained and equipped as an elite force within the Police Department and have the capacity to immediately respond to any emergency.
- Unit to be equipped with life saving, search & rescue equipments, medical supplies, security arrangements, communication facilities and emergency rations and be self-sufficient.
- Trained in latest techniques of search, rescue and communication in collaboration with International agencies.
- Co-opt doctors into the team.

## Disaster Response and District Incident Command System

The response to disasters in the district will be organized according to the Incident Command System as adapted to conditions in Gujarat State (ICS/GS). The argument for the ICS is that its fundamental elements –unity of command, clarity of objectives and efficient resource use are common to the effective response to any disaster.

In Devbhumi Dwarka district, the multi-hazard response plan focused on sector specific action plans unlike the department specific planning approach in the previous plan documents. The disaster response is led by the **District Emergency Operation Center**(DEOC) under the command and control of the <u>District Collector</u>.



DDO - District Development Officer

DIO - District Information Officer

## **ICS-Basic Functions**

The basic functional descriptions for key elements in the district Incident command System are described below. Not all these functions need to be filled (activated) in every disaster. But the ensemble of these functions represents all the key tasks which need to be accomplished in a well planned manner and executed in effective and cost efficient disaster response effort.

**I. Incident Command**: responsible for overall management of an incident based on clearly stated mandate from higher authority and based on focused objectives responding to the immediate impact of the incident. The Incident command is led by an Incident Commander, who can be assisted by a Dy. Incident Commander. In each incident will have as many as many commanders and other staff as there are shifts in the incident operation. Shifts will normally not exceed 12 hours at a time and should be standardized to 8 hours each as soon as possible after the start of the incident.

#### **II. Command Staff Units**

#### Safety unit:

Responsible for ensuring the safe accomplishment of all activities undertaken in response to the incident. This task is accomplished through developing incident specific safety guidance documents, reviewing and advising on the safety of plans and monitoring actual operations to ensure safety of personnel and survivors

#### Protocol and Liaison unit:

Responsible for all official visits as well as liaison between the incident command and organizations providing personnel or material support being used to manage the incident. The first point of contact for NGOs and others coming to the disaster as well as responsible for managing coordination meetings (some of which may actually be held by taskforces or sections).

#### **<u>Public Information Unit:</u>**

Responsible for all media and public information tasks related to the incident. To accomplish its task, the unit can have the following sub units:

- o **public inquiries**: to handle non media requests for information
- **outgoing public information**: to handle public information dissemination
- **Public opinion feedback**: to collect information from the public (incident survivors and the non-affected)
- **Media center:** to provide a single point of contact for all media involved in the incident.
- **Press release and media access**: produce all releases and provide a single point of contact to arrange media access to the incident.
- **Monitoring and Feedback**: to monitor media reports and provide feedback to the incident management on coverage of the incident and to also take corrective measures and issue contradictions if required.

#### **III. Law and Order Section**

Responsible for assuring the execution of all laws and maintenance of order in the area affected by the incident. The law and order section incorporates law and order taskforce which may be created to deal with a disaster.

**Police functions**: as determined by the normal mandate for and special duties assigned to the police service

Home guard: as determined by the normal mandate for and special duties assigned to the home guard

**Volunteers**: supporting police and home guards in non-enforcement tasks, such as patrolling, monitoring and evacuations

#### **IV. Operation Section**

Responsible for assuring specific operations according to objectives and plans to address the immediate impacts of the incident. Taskforces under the operation section will deal with specific functional tasks, such as search and rescue, the provision of water or shelter. The composition and size of these taskforces depends on the nature of the incident.

The District administration of Devbhumi Dwarka has identified 16 expected task forces for key response operation functions that are described below. Additional taskforces can be added under the operations section as needed by the circumstances of a disaster. Each Taskforce is led by one organization and supported by other organizations.

<b>Emergency Operation</b> <b>Taskforce</b>	Functions				
1. Coordination and	Coordinate early warning, Response & Recovery				
Planning	Operations				
2. Administration and Protocol	Support Disaster Operations by efficiently completing the paper work and other Administrative tasks needed to ensure effective and timely relief assistance				
3. Warning	Collection and dissemination of warnings of potential disasters				
4. Law and Order	Assure the execution of all laws and maintenance of order in the area affected by the incident.				
5. Search and Rescue	Provide human and material resources needed to support				
(including Evacuation)	local evacuation, search and rescue efforts.				
6. Public Works	Provide the personnel and resources needed to support local efforts to reestablish normally operating infrastructure.				
7. Water	Assure the provision of sufficient potable water for human and animal consumption (priority), and water for industrial and agricultural uses as appropriate.				
8. Food and Relief Supplies	Assure the provision of basic food and other relief needs in the affected communities.				
9. Power	Provide the resources to reestablish normal power supplies and systems in affected communities.				
10. Public Health and	Provide personnel and resources to address pressing public				
sanitation(includingFirst aid and all medical care)	health problems and re-establish normal health care systems.				

Chapter: 6 Response Measures-Multi Hazard							
11. Animal Health and Welfare	Provision of health and other care to animals affected by a disaster.						
12. Shelter	Provide materials and supplies to ensure temporary shelter for disaster-affected populations						
13. Logistics	Provide Air, water and Land transport for evacuation and for the storage and delivery of relief supplies in coordination with other task forces and competent authorities.						
14. Survey (Damage Assessment)	Collect and analyse data on the impact of disaster, develop estimates of resource needs and relief plans, and compile reports on the disaster as required for District and State authorities and other parties as appropriate.						
15. Telecommunications	Coordinate and assure operation of all communication systems (e.g.; Radio, TV, Telephones, and Wireless) required to support early warning or post disaster operations.						
16. Media (Public Information)	Provide liaison with and assistance to print and electronic media on early warning and post-disaster reporting concerning the disaster.						

The specific response roles and responsibilities of the taskforces indicated above is that these roles and responsibilities will be executed and coordinated through the ICS/GS system. For example, in flood, search & rescue would come under the Operations section, Transport would come under the Logistics Section and Public Information under the Public Information Unit.

#### V. Planning Section

Responsible for collecting and analyzing information and developing plans to address the objectives set to address the incident. The overall work of the planning section will include efforts undertaken by any planning and coordination taskforce which is established as part of the response to a disaster. Units under the section include:

- 1. Assessment and planning
- 2. Resources and Requirements
- 3. Management information system
- 4. documentation
- 5. Demobilization and
- 6. Technical specialists

## VI. Logistic section

Responsible for all task and functions related to provision of material and other resources needed for operations and the physical and material support and operation of the incent management team. This section includes transportation taskforce established to support disaster operations. Logistics tasks are through the following units:

- 1. storage and supply
- 2. Facilities
- 3. staff support
- 4. communications
- 5. transportation (include ground, air water):

### VII. Finance and Administration

Responsible for managing all financial and administrative tasks related to incident field operations. These tasks may, but would not usually include disbursement of financial aid to those affected by an incident. The task of this section are accomplished through following units: 1. Human resources; 2. procurement; and 3. accounting and records





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Recovery is defined as decisions and actions taken after a disaster with a view to "restoring or improving life and assets of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery and reconstruction (R&R) or comprehensive rehabilitation is the last step in cycle of disaster management. In addition, this is the phase of new cycle, where the opportunity to reconstruction and rehabilitation should be utilised for building a better and more safe and resilient society.

Strategies for restoring physical infrastructure and lifeline services may be:

### **Build Back Better:**

This ensures greater resilience, preparedness; and minimum loss in an event of future disaster.

## **Participatory Planning**:

Infrastructure improvement measures need to be balanced with, or at least be in line with, the social and cultural needs and preferences of beneficiaries

### **Coordination**:

A plan of recovery will help better coordination between various development agencies. Damage Assessment and Needs Assessment shall be the basis of recovery planning Various Sectors for recovery process may be

- Essential Services- Power, Water, Communication, Transport, Sanitation, Health
- Infrastructural: Housing, Public Building and Roads
- Livelihood: Employment, Agriculture, Cottage Industry, Shops and Establishments

Basic services such as power, water supply, sanitation, wastewater disposal etc. should be restored in shortest possible time. Alternate arrangement of water supply, temporary sanitation facilities can be sought with help of special agencies.

Special arrangements for provision of essential services should be ensured. It can include creating temporary infrastructure for storage and distribution of water supply, running tankers, power supply and sanitation facilities

- Damage Loss Assesment
- Restoration of Essential Services and Infrastructure
- Following tables are to be filled after an event of disaster
- Power

Item/Serv ices	No. of unit damaged	No of villages affected	Populati on affected	Recovery measures	Impleme nting agency	Tentative Duration (Months)	Bud get
Feeder							
Transform							
ers							
HT Lines							
LT Lines							
Electric							
Poles							

To be planned after initial damage assessment by departments

## ✤ Health

	PHC (villag e name)	CH C	Sub Centre	Drug Store	Recover y Measure s	Implemen ting agency	Tentative Duration (Months)	Budget
No of buildings damaged								
No of health centres inaccessibl e								
Refrigerati on and other vital equipment for storage								
Drugs and medicines perished	(Locat ion and qty)							
No of Ambulance damaged								

To be planned after initial damage assessment by departments

## Social

People in need of immediate rehabilitation including psychosocial support (due to disaster)

Village	Men	Women	Children	Total	Recovery Measures	Implementing agency	Tentative Duration (Months)	Budget

Water Supply

Туре	Village	No. of unit affected	Faliya/ Population affected	Recovery Measures	Implementi ng agency	Tentative Duration (Months)	Budge t
Well							
Borewells							
Pond							
Water Supply Disrupted							
Contamina tion							
ESR damaged							
GLR Damaged							
Sump damaged							
Pipe lines damaged							
Standpost damaged							
Cattle trough damaged							
Handpum p							

## ✤ Road and Transport

Road damage	Location	Severity	Km	Recovery Measures	Implementin g agency	Tentative Duration (Months)	Budget
Panchayat							
State Roads							
National Highway							
Nagar Palika							

	Village/ Ward	Population	Alternate road/route	Recovery Measures	Implementin g Agency	Tentative Duration (Months)	Budget
Road Cut off							
Rail Conne ctivity							

## \* Communication

Туре	Office/Tower Damaged	Villages affected	Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget
Landline connectivity	(No. of unit and location)					
Mobile connectivity						
Wireless Tower						
Radio						

# Food Supply

List of village affected by disruption in food supply

Typ e	No. of godow n damag e	Type of grains perishe d (Ton)	Qty of grain perishe d (Ton)	Qty of grai n at risk (Ton	Recover y Measure s	Implementin g Agency	Tentativ e Duratio n (Months )	Budge t	
95									

Civil Supply				
APMC				
Other				

# Housing

	Partial Damage		Fully Damaged / Collapsed		Prog / Schem	Implementin g Agency	Tentativ e Duration	Budge t
Kuch	Pucc	Kuch	Pucc	Measure s	e	grigency	(Months	C
a	a	a	a				)	

**Public Utilities** 

Public Buildings	Partial damag e (No. of units)	Fully Damaged / Collapse d (No. of Unit)	Recover y Measure s	Prog/ Schem e	Implementin g Agency	Tentativ e Duration (Months )	Budge t
Panchayat							
Educationa l Buildings							
Anganwad							
i							
Hospitals							
Office							
Buildings							
Market							
Police							
station							
Communit							
y Halls/							
Function							
plots							

## **Restoration of Livelihood Provisioning of Employment**

Occupational category	No. of workers	Implementing Agency	Tentative Duration (Months)	Budget		
Skilled labourers						
96						

Unskilled and , Agricultural labourers		
Small and marginal farmers		
Construction workers		
Salt pan workers		
Fisher folk		
Weavers		
Other artisans		

# Land Improvement

Land erosion / siltation (Hectare)	HHs affected	Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget

# Agricultural

Crop failure (Hectare)	HHs affected	Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget

Non farm livelihood

	Extent of damage/disruption					
Cottage Industry	Tools and equipment (Specify no. and type)	Goods and material (Specify type and qty)	Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget
Handloom						
Pottery						
Food						
Processing						
Diamond						
sorting etc						
Printing/						
Dying						
Other						

#### Shops and establishment

Extent of damage/disruption			Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget
<b>Building</b> (No. and location)	<b>Tools and</b> <b>equipments</b> (Specify no. and type)	Goods and materials (Specify type and qty)				

#### Long term recovery programme

Disaster recovery typically occurs in phases, with initial efforts dedicated to helping those affected meet immediate needs for housing, food and water. As homes and businesses are repaired, people return to work and communities continue with cleanup and rebuilding efforts. Many government agencies, voluntary organizations, and the private sector cooperate to provide assistance and support.

Some individuals, families and communities that are especially hard hit by a disaster may need more time and specialized assistance to recover, and a more formalized structure to support them. Specialized assistance may be needed to address unique needs that are not satisfied by routine disaster assistance programs. It may also be required for very complex restoration or rebuilding challenges. Community recovery addresses these ongoing needs by taking a holistic, long-term view of critical recovery needs, and coordinating the mobilization of resources at the, and community levels.

Oftentimes, committees, task forces or other means of collaboration are formed with the goals of developing specific plans for Community recovery, identifying and addressing unmet or specialized needs of individuals and families, locating funding sources, and providing coordination of the many sources of help that may be available to assist. Some collaborations focus on the community level and rely on the expertise of community planning and economic development professionals. Other collaborations focus on individual and family recovery and are coordinated by social service and volunteer groups. All such efforts hope to lay the groundwork for wise decisions about the appropriate use of resources and rebuilding efforts.

Under the National Response Framework, Emergency Support Function (ESF) #14 Community Recovery coordinates the resources of federal departments and agencies to support the long-term recovery of States and communities, and to reduce or eliminate risk from future incidents. While consideration of long-term recovery is imbedded in the routine administration of the disaster assistance and mitigation programs. some incidents, due to the severity of the impacts and the complexity of the recovery, will require considerable interagency coordination and technical support.

ESF #14 efforts are driven by State/local priorities, focusing on permanent restoration of infrastructure, housing, and the local economy. When activated, ESF #14 provides the coordination mechanisms for the Federal government to:

- Assess the social and economic consequences in the impacted area and coordinate Federal efforts to address Community recovery issues resulting from an Incident of National Significance;
- Advise on the Community recovery implications of response activities, the transition from response to recovery in field operations, and facilitate recovery decision-making across ESFs;
- Work with State, local, and tribal governments; NGOs; and private-sector organizations to conduct comprehensive market disruption and loss analysis and develop a forward looking market-based comprehensive long-term recovery plan for the affected community;
- Identify appropriate Federal programs and agencies to support implementation of the Community recovery plan, ensure coordination, and identify gaps in resources available;
- Avoid duplication of assistance, coordinate to the extent possible program application processes and planning requirements to streamline assistance, and identify and coordinate resolution of policy and program issues; and
- Determine/identify responsibilities for recovery activities, and provide a vehicle to maintain continuity in program delivery among Federal departments and agencies, and with State, local, and tribal governments and other involved parties, to ensure follow-through of recovery and hazard mitigation efforts.

## Grievances Redressal System

Grievance redressal is important aspect in the context of providing need based assistance to affected communities with transparency and accountability. It is also ensures the protection of their rights and entitlements for disaster response services.

No.	Key Person/ Establishment	Contact No	Address
1	DEOC/ RAC	02833-232125	Collector Office-District
		02833-232084	Emergency Operation centre
2	DDO	0288-2553901	District Panchayat
3	Police	02833-232002	S.P.Office, Devbhumi Dwarka

#### Grievance Redressal System



# Chapter 8 Financial Arrangement



## Chapter: 8 Financial Arrangement

## 6.1 Sources of Funds

## Funds available at the National and State Level

1. **The Ministry of Finance** has allocated funds for strengthening Disaster Management Institutions, capacity building and response mechanisms, as per the recommendation of 13th Finance Commission.

## 2. Prime Minister's Relief Fund:

At the National level, Prime Minister's Relief Fund was created shortly after Independence with public contribution to provide immediate relief to people in distress for:

- a. Immediate financial assistance to victims and next of kin.
- b. Assist search and rescue.
- c. Provide Health care to the victims.
- d. Provide Shelter, food, drinking water and sanitation.
- e. Temporary restoration of roads, bridges, communication facility and transportation.
- f. Immediate restoration of education and health facilities.

### 3. Chief Minister Relief Fund:

At the state level, provisions have been made to provide immediate support to the distressed people affected by natural calamities and road, air and railways accidents under the Chief Minister's Relief Fund.

#### 4. Calamity Relief Fund

To provide for relief for famine, drought, floods and other natural calamities, funds are provided in the state budget under the head "2245-Relief on account of Natural Calamities". Besides establishment charges, funds are provided for the grant of gratuitous relief in the shape of concessional supply of food, cash payment to indigent persons, cash doles to disabled supply of seed, fodder, medicines, prevention of epidemics, provision for drinking water, transport facilities for goods and test relief works. Funds are also provided to meet unforeseen expenditure in connection with the natural calamities and other allied purposes.

#### 6. Finance and Budgeting

Budget planning is a comprehensive exercise for annual financial planning. For Disaster Management, there can be two categories of budget heads—

a) Line Department's own fund through various schemes and programmes;

b) Additional budget required particularly for DM activities.

To ensure the long-term sustenance and permanency of the organisation funds would be generated and deployed on an ongoing basis. There are different ways to raise the fund in the State as described below

## State Disaster Response Fund

To carry out Emergency Response & Relief activities after any disaster the State Disaster Response Fund is made available to Commissioner of Relief, Revenue Department under which the Central Government will share 75% and the Govt. of Gujarat has to share 25% as per the recommendation of 13th Finance Commission.

## Chapter: 8 Financial Arrangement

#### **State Budget**

The State Disaster Management Authority submit to the State Government for approval of a budget in the prescribed form for the next financial year, showing the estimated receipts and expenditure, and the sums which would be required from the State Government during that financial year. As per the provisions of The Gujarat State Disaster Management Act, 2003 the Authority may accept grants, subventions, donations and gifts from the Central or State Government or a local authority or any individual or body, whether incorporated or not.

#### **District Planning Fund**

For preparedness, mitigation, capacity building and recovery, fund can be raised from MP or MLA grant as received for developmental work. Departmental arrangement also can be made.

#### Partnerships

There are projects/schemes in which funding can be done by a public sector authority and a private party in partnership (also called on PPP mode funding). In this model State Government along with Private organizations or with Central Government share their part.

Name	Purpose	Finance Arrangements		Activities that can be take under scheme		take	Nodal Agency
NDRF	Relief	100%	Central	Cash	and	kind	Revenue
(NCCF)	Assistance	Govt		relief			Department
		50%	Centre,				
SDRF (CRF)	Relief	50% Sta	te	Cash	and	kind	Revenue
	Assistance			relief			Department

#### **Centrally Sponsored scheme**



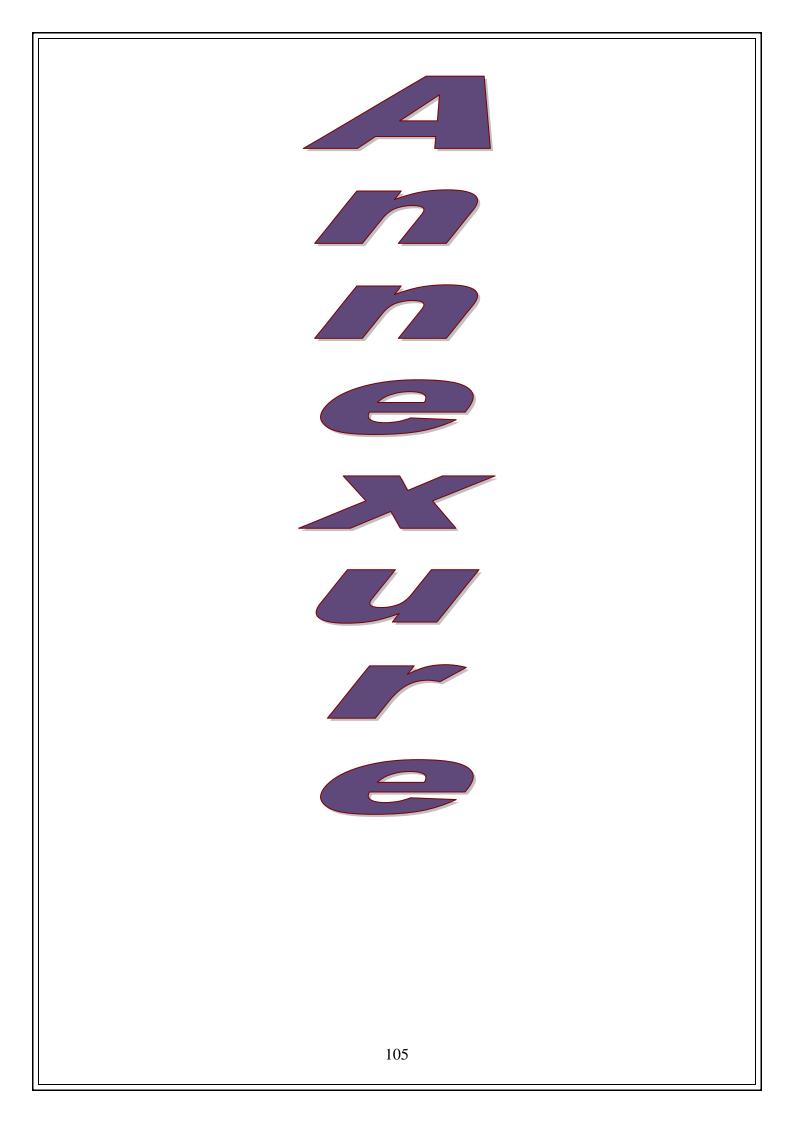
# **Chapter 9 Maintenance of the Plan**



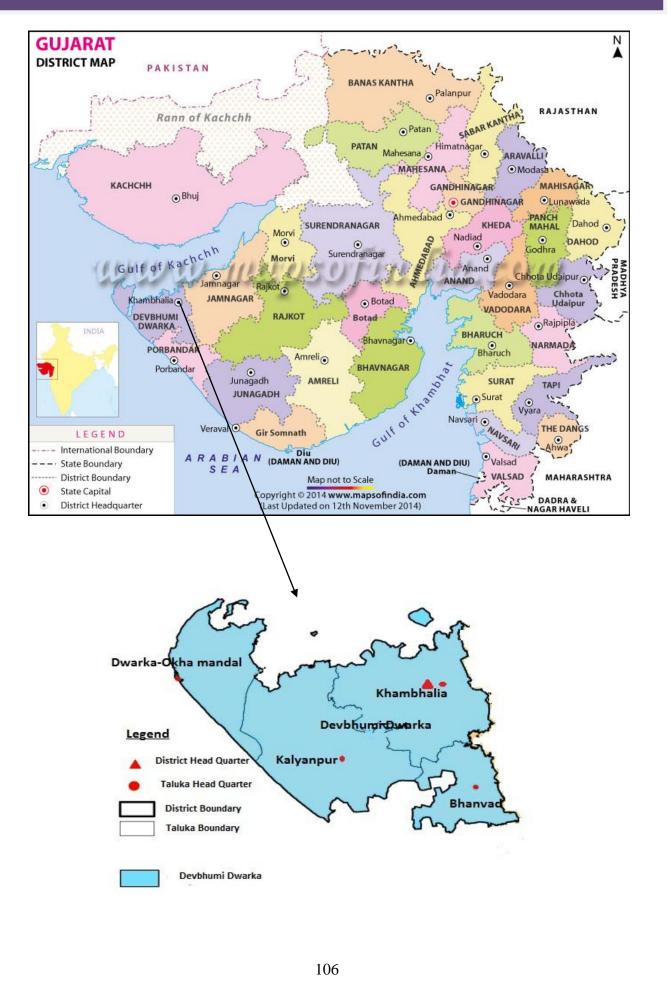
## Chapter: 9 Maintenance plan

District Disaster Management Committee (DDMC) shall compile its learning and propose new mechanisms for improvement of the capacity to deal with disasters. As a part of Pre-Monsoon DDMC will update District Disaster Management Plan in the month of May-June and also revise in the month of October-November every year.

Major Learning based on experience of last disasters and mock drills (on planning/implementation/compliance)	Revisions adopted/proposed	Remarks
Flood	May-June	Due to highly flash flood affected area
Chemical disaster	Jan, Feb	Due to MAH unit
Tsunami	June, Oct	Due to coastal belt
Cyclone	May-June and Oct.Nov.	Due to Coastline

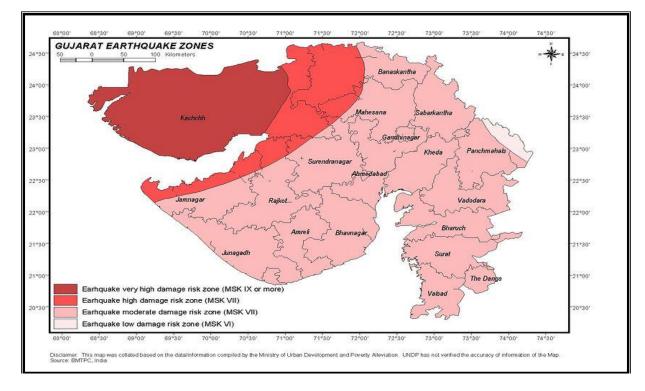


#### Annexure-1 Gujarat Map

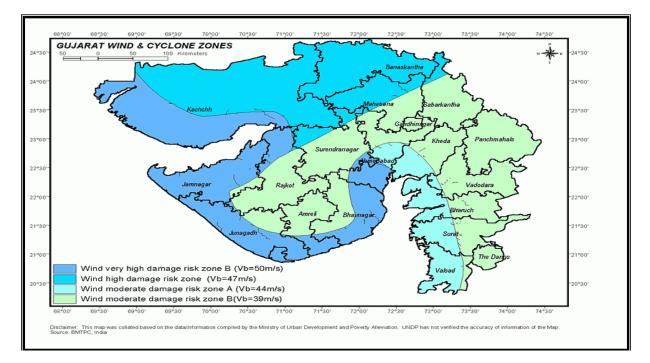


#### Annexure: 1 Hazard Prone Map

# \* Earthquake Prone Map:

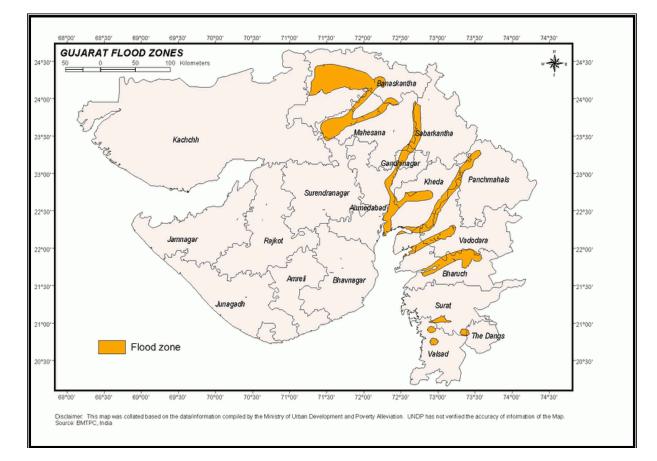


# Cyclone Prone Map:



## Annexure: 1 Hazard Prone Map

# Solution Flood Prone Map:



#### Annexure: 2 Rainfall Data

## \* Rainfall Detail for Devbhumi Dwarka District from 2008 to 2020 in mm.

Sr. No	Taluka	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	Khambhalia	501	825	2645	619	545	1865	506	423	993	853	579	1354	2643
2	Kalaynpur	835	1203	1950	1359	380	987	570	308	436	788	166	1152	2553
3	Dwarka	554	816	1246	1117	470	414	891	462	335	400	144	634	1401
4	Bhanvad	730	1156	1451	866	319	1062	675	459	706	714	282	1035	2389
Total	-	2620	4000	7292	3961	1714	4328	2642	1654	2470	2755	1171	4175	8986
Averaç Rain(2	ge 007-2019)	655	1000	1823	990	428	1082	660	596	608	689	293	1044	2246

### Annexure: 3 Dam site and Affected villages

✤ Detail of Dam site and affected low laying villages:

Sr.	Name Of Dam	Ν	Flood Prone Vi	llages	Popu	Distanc	Contact
No.		0.	Village	Taluka	latio	e From	Number of
					n	Dam KM.	Section officer
1	Sani	1	Dangarvad	Kalyanpu	1067	4	Shri V.R.
	02891-228257	2	Jepur	r	183	0.50	Nakum
		3	Ranparda	-	629	3.80	9687630427
		4	Rawal		1536 6	6.30	Shri M.D. Nakum
		5	Suryavadar		2124	1080	9687630426
		6	Chandravada		1989	10	
		7	Harshad		325	14	
		8	Gandhavi	-	1863	13	
		9	Ashiyavadar	-	906	0.60	
2	Sindhani	1	Chachlana	Kalyanpu	1655	0.50	Shri D.D.
-	02891-276504	2	Gangani	r	1655	12	Kambhariya
		3	Devaliya		5327	3	9904646851
		4	Harshad	-	325	12	
		5	Gandhvi	-	1863	11	-
3	Shedhabhadathar	1	Kanpar Sherdi	Kalyanpu	653	0.50	Shri L.R
5	i	2	Chapar	r	1603	5	Khuti-
	02833-273204	3	Chur	-	1375	6	9429321095
		4	Mangariya		320	8	
		5	Haripar	-	2422	12	-
4	Vartu-1	1	Morzar	Bhanvad	2352	0.50	Shri P.L.
	02896-277821	2	Navagam	-	1888	3	Ladumora -
		3	Shedhakhai		1404	0.50	9712292336
		4	Rupamora		2252	8	
		5	Ranparda		456	10	
		6	Ambaliyara		710	12	
		7	Bhenakvad		2075	15	
		8	SevakDevaliy a		1128	2.50	
		9	Sanala		1250	16.20	
5	Sonmati	1	Jampar	Bhanvad	1730	10.20	Shri L.R
5	02896-247868	2	Sevak	Dianvad	1128	3	Khuti-
	02090 217000	2	Devaliya		1120	5	9429321095
		3	Navagam		1888	4.50	, , , , , , , , , , , , , , , , , , , ,
		4	Rupamora	-	2252	9	
		5	Ranparda		456	11	
		6	Ambaliyara	-	710	13	1
		7	Bhenakvad	-	2075	15	
6	Ghee	1	Khambhalia	Khambha	6335	2.00	Shri R. K
0	02833-	-		lia	4	2.00	Nandaniya
	232697(O)	2	Ramnagar	Khambha	4418	2.50	7874404021

		3	Harshadpur	Khambha	9213	5.00	
		4	Kothavishotri	lia Khambha	1732	11.00	_
		4	Koulavisliouri	lia	1752	11.00	
		5	Kabarvishotri	Khambha	822	10.00	_
		5	ixaoai visilotri	lia	022	10.00	
		6	Sodasala	Khambha	1116	12.00	-
		Ũ		lia		12.00	
		7	Salaya	Khambha	2687	13.00	-
				lia	5		
7	Sorathi	1	Gorana	Kalyan	2788	5.50	Shri M.R.
	(Porbandar	2	Gandhvi	pur	1863	15	Odedara-
	District)	3	Harshad		325	16	9426772449
	0286-2276400	4	Rawal		15366	10	
		5	Adwana	Porban	2500	26	
		6	Bhetkadi	dar	2800	19.50	
		7	Sodhana		4000	3.50	1
		8	Miyani		5000	3.50	
8	Kabarka	1	Kabarka	Bhanva	2000	2	Shri P.L.
	02896-277578	2	Bhoriya	d	1500	03	Ladumor -
		3	Fotdi		2000	5	9712292336
9	Gadhki 02833-273269	1	Sidhdhapur	Khamb haliya	1500	0.50	Shri P. A Chauray
		2	Jampar	Kalyan	1200	3	7016081905
		3	Dhumthal	pur	300	2.50	
10	Veradi-1	1	Verad	Bhanva	5000	0.50	Shri N.G.
	02896-274424	2	Sai Devaliya	d	2000	8	Taviyad- 9712874706
11	Sinhan	1	Nana Mandha	Khamb	1330	12	Shri J.R. Patel-
		2	Mota Mandha	haliya	1446	15	8200317454
		3	Nana ambala		1443	18	
		4	Mota ambala		594	20	
12	Veradi-2	1	Sai Devaliya	Bhanva	2500	0.30	Shri N.G.
	02896-291583	2	Bhanvad	d	20000	10	Taviyad- 9712874706
13	Vartu-2 02896-232968	1	Zarara	Bhanva d	4000	1	Shri S.B. Makwana
		2	Gandhvi		1800	40.00	7687626427
		3	Gorana	] [	2788	21.00	
		4	Harshad	Kalyan	325	41.00	_
		5	Raval	pur	15366	27.00	_
		6	Ranpara		629	26.00	
14	Minsar- Vanavad-	1	Vanavad	Bhanva	1477	0.5	Shri T.K
	02896-241286	2	Shiva	d	2245	2.00	Makwana
		3	Katkola		2644	3.50	(D.E)
		4	Jasapar		1690	5.00	8347797997
		5	Vansjaliya(Ja m jodhpur- Jamnagar)		3500	7.50	
15	Mahadeviya	1	Mahadeviya	Khamb halia	900	1	Shri C.P. Patel 787458535

		2	Charantungi	Lalpur	1200	2		
16	Kandorna	1	Kandorana	Khamb	1000	0.5	Shri	T.U.
		2	Kota	halia	800	2.00	Kadivar	
							99791282	264

Total flood affected Villages are- 73 Total Gated Dam: - 2 : (Sani ) and (Vartu-2) Total Non Gated Dam: - 13 Dam In Porbandar District – Sorathi Total No. Of Dam: - 16

### Important Contact Numbers in flood situation

Sr. No.	Officers details	Phone/Address
1	Shri N.H. Kapdi	0281-2440485(O)
	Focal Officer flood Saurashtra and Superitendent	0281-2472604(Fax)
	Enigineer	0281-2476093(P)
	Rajkot Irrigation Department, Rajkot	9427312601(M)
2	Rajkot flood Control room	0281-2443205
		0281-2453501(F)
3	Smt. K.H. Mehta,	0288-2670688(O)
	Sub-focal officer, Flood, Jamnagar nad	0288-2678106(Fax)
	Executive Engineer	0288-2559322(P)
	Jamnagar Irrigation Department, Jamnagar	9925016735 (M)
4	Shri D. K Singh	0288-2570423(O)
	Executive Engineer, Salinity department,	9408103062(M)
	Khambhaliya	
5	Shri N.R. Makawana	02833-236232(F)
	Executive Engineer,	0288-2671404(O)
	Irrigation Panchayat, Devbhumi Dwarka	9879034165(M)

#### Annexure: 4 Coastal Villages list

 List of Coastal Villages: There are 44 coastal villages located in the district. Following is the block wise list of Coastal Villages.

Sr.No.	Sr. No	Name of Taluka	Name of village				
1	1	Kalyanpur	Mota Asota				
2	2		Pindhara				
3	3		Gandhvi				
4	4		Gojinesh				
5	5		Sanosari				
6	6		Gangadi Lamba Navadra				
7	7						
8	8						
9	9		Bhogat				
10	1	Khambhalia	Beh				
11	2		Kalavad Simani				
12	3		Chudeshwar				
13	4		Goinj				
14	5		Parodiya				
15	6		Mota ambala				
16	7		Nana Ambala				
17	8		Bharana				
18	9		Nana Mandha				
19	10		Vachhlabara				
20	11		Sodasala				
21	12		Vadinar				
22	13		Ajad Tapu				
23	14		Nana Asota				
24	15		Mota Mandha				
25	1	Dwarka	Bet				
26	2		Bhimrana				
27	3		Padli				
28	4		Мојар				
29	5		Shivrajpur				
30	6		Hamusar				
31	7		Shamlasar				
32	8		Poshitra				
33	9	F	Rajpara				
34	10		Varvala				
35	11	F	Baradiya				
36	12		Okhamadhi				
37	13		Kuranga				
38	14	F	Meripur				
39	15	F	Tupni				
40	16	F	Makanpura				
41	17		Okha Port				
42	18		Mithapur				
43	19		Arambhada				
44	20	F	Surajkaradi				

#### Annexure: 5 Contact Detail of Control room

#### Contact Detail Controm room Control Rooms- Contact Numbers

On receipt of information about the incident, all Task force leaders shall report immediately to the collector in the District EOC. The coordinator of each taskforce shall send communication to their members to report immediately in their respective control rooms. Taluka liaison Officers shall report to Mamlatdars in their respective Taluka control rooms.

Sr. No	EOCs/ Control rooms	Contact Numbers				
1	State EOC – Gandhinagar	079-23251900				
2	Relief Commissioner	(079) 23251509 ® 23251591				
3	Director of Relief	(079) 23251611 ® 23234364				
4	Additional CEO, GSDMA	(079) 23259220 ®23259275 (M) 9909973692				
5	TASKFORCE Operation Room					
	1. Warning and Communications (RAC)	02833-232620				
	2. Law & Order (Police Contol room)	02833-232002				
	3. Public Works R&B-S (M) 9426464610	0288-2550362				
	4. Shelter	0288-2550362				
	5. Water Supply GWSSB M 9978406618	02833-234781, 235765				
	6. Food & Relief supplies DSO 9687888998	02833-235990				
	7. Public Health & Sanitation M 9099900607	02833-234001				
	8. Power (PGVCL Eng) 9879200762(KMBL),	02833-234791/94 O.236963(KMBL) ,				
	7567109172(DWK)	02892-234610(DWK)				
	9. Logistics DDO (M) 9978406492	02833-235947				
	10. Animal Health & Welfare M 9426818294	02833-234251				
	11.Damageassessment/Survey(R&B-P)9825873849	02833-234211				
	12. Media/public Information, Dy. Dire. Information	02833-235932 /9067393800				
	13. Planning and coordination (Collector)	02833-233803				
	14. Finance/ Administration/ protocol	02833-232620				
	15. District Emergency operation center	02833-232125				
7	Taluka EOCs					
	1. Bhanvad	02896-232113				
	2. Khambalia	02833-234788				
	3. Kalyanpur	02891-286227				
	4. Dwaraka	02892-234541				

#### Annexure: 6 Department Wise senior officer list

S.		vbhumi Dwarka				_	D Code : 02833
3. N 0.	Designation	Name	Office	Residence	Mobile	Fax	Email Id
1	Collector	Shri Dr. Narendra Kumar Meena (IAS)	232803	232456	9978405933	232102	collector- devbdwarka@guj at.gov.in
2	DDO	Shri D.J. Jadeja (IAS)	235947	-	9978406492	235947	ddo- dev@gujarat.gov
3	SP	Shri Sunil Joshi (IPS)	233223	-	9978405976	232002	<u>sp-jam-</u> dbdwarka@gujar .gov.in, spdevbhumi@gm <u>l.com</u>
4	Deputy Conservator of Forest, Vistaran	Shri R.Dhanpal (IFS)	232574	-	8238861705	-	dcfsfdbd82@gmai om acf.khmb@gmail.o m
5	Deputy Conservator of Forest, Marine National Prak	Shri R.Senthal (IFS)	2552077, 2679357	-	8980029321	277016 1	mnpforest@yahoo. m mnpforest@gmail. m
6	Resident Additional Collector	Shri K.M. Jani	232620	-	9727763794	232102	<u>addl-collector-</u> dev@gujarat.gov
7	DFO, (Normal)	Su Shri R.B. Parshana	232574	-	9428274845	-	dcfjmr@gmail.cc
8	DFO, (Normal) Porbandar (Barada)	Shri D.J. Pandaya (I/C)	0286- 2242551	-	9429551267	221037 3	dcfpbr@gmail.cc
9	Director- DRDA	Shri. Y. D. Shrivastava (I/C)	235947	-	9825262319	-	drda.dwarka@gn l.com
10	Executive Engineer, R & B (State)	Shri A. J. Chauchan	0288- 2550362	-	9426464610	26781 06	rnb- jam@gujarat.g v.in
1	Executive Engineer, R & B (Panchayat)	Shri A. J. Chauhan	234211	-	9825873849	-	<u>eedwarka@yaho</u> <u>com</u>
12	Executive Engineer, R & B, Irrigation State (Vartu- I)	Shri K.H. Mehta	0288- 2670688 FAX 2663235	-	9979743174	-	eejidn@gmail.co
13	Éxecutive Engineer, Und Jal	Shir H.K. Mehta (I/C)	0288- 2572088 FAX	-	9925016735	-	eeundjam@gmail. m

	Scheme,		25720625				
	Irrigation						
	Jamnagar						
14	Executive Engineer, (Vartu-2 Sani) Porbandar	Shri B.K. Valgotra	0286- 2222897	-	9429955178	-	exeirripor@gmail. m
15	Executive Engineer, Irrigation, Panchayat	Shri N.R. Makawana	02833- 236232	-	9879034165	-	<u>shinchai.dev1@g</u> <u>ail.com</u>
16	Executive Engineer, Salinity department	Shir N.H. Sadiya	0288- 2570423/4 FAX 2551917	-	8980725349	-	scdnjam@yahoo.co n
17	Executive Engineer,GW SSB	Shri P. M. Nagar	234781, 235765	-	9978406618	-	eedbdgsswb1@g ail.com
18	DSO	Shri. P.B. Manguda	235990	-	9687888998	232102	supp- devbdwarka@guj at.gov.in
19	Dy. DDO (Revenue)	Shri. Y. D. Shrivastava	235947	-	9825262319	-	dy.ddo.gen@gma <u>com</u>
20	Dy. Director Animal Husbandary	-	02833- 234251	-	9426818294	-	-
21	CDHO	Dr. R. B. Patel	234001	-	9099900607	267109 7	cdho.health.dwar a@gmail.com, dpmcc.health.dw ka@gmail.com
22	Superitende nt of Civil Hospital, Khambhaliy a	Dr. M.P. Mattani	02833- 235170	-	9825380576	-	<u>cdmo-health-</u> jad@gujarat.gov.
23	DEO	Shri B.H Vadhel (I/C)	235976	-	7567806316 , 7069008475	-	deodevbhumidwa ka @gmail.com
24	DPEO	Shri B.H Vadhel	236376	-	7567806316 , 7069008475	-	dpeodevbhoomic arka @gmail.cor
25	District Agriculture Officer	Shri A.B. Kamani	235868	-	9898303071 7984142698	-	dao-agri- devbhumi@gujarat ov.in
26	RO-GPCB	Shri B.G. Sutreja	0288- 2752366	-	7574827580	_	<u>ro-gpcb-</u> jamn@gujarat.go <u>n</u>
27	ARTO,	Shri V.S. Chauhan	233300	-	9586571977	-	<u>arto-trans-</u> dbd@gujarat.gov
28	PO-GMB, Okha	Captain Neeraj Hiravani	02892- 262001, 262049,	-	9512200035	262002	portofficerokp@g ail.com

			262039				
29	Superintend ent of Fishries	Shri Rahul Lashkari	02892- 262076	-	9724268863	-	asfokha@gmail.co <u>m</u>
30	Assistant Director, Industrial Safety & Health	Shri B. S Patel	0288- 2678206	-	940887207 8	-	ad4-dish- brd@gujarat.go v.in astdish- jam@gujarat.go v.in
31	General Manager DIC	Shri P.B Patel	2670380	-	9106540764	266039 2	gm-dic- dbd@gujarat.gov.i n
32	Divisional Director, GSRTC, Jamnagar	Shri M.B. Raval	02833- 234772	-	6359919034	-	dmkbl01@gmail.co <u>m</u>
33	Assistant Director Information	Smt Barad	235932	-	9067393800	232073	informationdev dwarka@gmail.co m
34	Executive Engineer- PGVCL, Khambhaliy a Division	Shri M.G. Chavada	234791/94 O.236963 FAX.23508 8	-	9879200762	-	de1khdo.pgvcl@geb mail.com hrjmnkhdo.pgvcl@ge bmail.com
35	Executive Engineer- PGVCL, Dwarka Division	Shri M.A. Vghela	02892- 234610	-	7567109172	-	<u>ee.dwarkado.pgvcl</u> @gebmail.com
36	District Project Officer- GSDMA	Shri Mohit Sisiodiya	232183, 232125, 232084	-	9407115141 , 8770399561	232102	<u>disa-</u> devbdwarka@gujar at.gov.in
37	Deputy Mamlatdar, Disaster Manageme nt	Shri Rambhi Chavada	232183, 232125, 232084	-	9904084101	232102	<u>disa-</u> <u>devbdwarka@gujar</u> <u>at.gov.in</u>

		1	Details of Ta			,	
S. No.	Taluka Name	Designation	Officer Name	Office No.	Mobile	Fax	Email Id
		Prant Officer	Shri Dinesh Ramesh (IAS)	02833-234577	9978405354	-	sdm-kham- jam@gujarat.gov.
		Mamlatdar	Shri K.G. Lukka	02833-234788	9825593090	-	mam- khambhalia@guja t.gov.in
1	Khambhalia	TDO	Shri N.B. Chavada	02833-234792	9427773678	-	tdo- khambhalia@guja t.gov.in
		Chief Officer Khambhalia	Shri A.K.Gadhavi	02833- 234712	9979887921	-	np_khambhaliy @yahoo.co.in
		Chief Officer salaya	Shri N.S. Shaikh	02833-285448	9427054411	-	np_salaya@yaho o.in
		Prant Officer	Shri Dinesh Ramesh (IAS)	02833-234577	9978405354	-	sdm-kham- jam@gujarat.gov
2	Bhanvad	Mamlatdar	Shri K.M. Aghera	02896- 232113, 232116	7567002729 9979024790	-	mam- bhanvad@gujara ov.in
		TDO	Shri A.S. Bhatt	02896-232024	9429083769 7567013217	-	tdo- bhanvad@gujara ov.in
		Chief Officer Bhanvad	Shri M.V. Joshi	02896-232159	7984238730 8128680515	-	np_bhanvad@ ahoo.co.in
	Kalyanpur	Prant Officer	Shri N.D. Bhateriya	02892- 235733/53	7567009674	-	<u>po-dwarka-</u> jam@gujarat. <u>v.in</u>
3		Mamlatdar	Shri I.R. Parmar	02891-286227	9925340580	-	mam- kalyanpur@gujar gov.in
		TDO	Shri S.K. Menat	02891-286223	9909750375 7567018989	-	tdo- kalyanpur@gujar gov.in
		Chief Officer Raval	Shri A.K.Gadhavi (I/C)	02891-228249	9979887921	-	np_jamraval@ ahoo.co.in
		Prant Officer	Shri N.D. Bhateriya	02892- 235733/53	7567009674	-	<u>po-dwarka-</u> jam@gujarat. <u>v.in</u>
	Okha	Mamlatdar	Shri V.H.Barhat	02892-234541	7567796425 7567002769	-	mam- okhamandal@gu at.gov.in
4	Mandal/Dw arka	TDO	Shri N.B. Chavada	02892-234052	7567019789	-	tdo- okhamandal@gu at.gov.in
		Chief Officer Dwarka	C B Dudiya	02892- 234919, 234449	9510950811	-	<u>np_dwarka@v</u> hoo.co.in
		Chief Officer Okha	Shri Vinod Kumar C Rathod	02892-262035	9824588145	-	np_okha@yahoo .in

#### Annexure: 6 Department Wise senior officer list

#### Defense Forces:-

### 1. Coast Guard:

Sr.No.	Name	Designation	Office no	Mo.No.	Fax no
1	Shri	Commanding	02833256560,256336	9099028767	02833256560
	Raman	Officer ICGS -			
	Kumar	Vadinar			
2	Shri H H	Commandant	02892862257	9442114540	
	More	ICGS-Okha			

### 2. Army:

Sr.No.	Name	Designation	Office no	Mo.No.	Fax no
1	Colonel	Commanding Officer-	02882540670,	9566986668	02882540670
	M Radha	Jamnagar military	02882556635		
	Krishnan	Station			

### 3. Navy:

Sr.No.	Name	Designation	Office no	Mo.No.	Fax no
1	Captain Amit	Commanding Officer,	02892-	9869065222,	02892262040
	Jain	INS Dwarka	262161	9328505096	

### 4. Air Force:

Sr.No.	Name	Designation	Office no	Mo.No.	Fax no
1	VSM Sanjay	Air CMDE	02882569500		02882720017
	Nimesh				

# Annexure: 7 SATELLITE TELEPHONE NUMBER

S.No.	DISTRICT NAME	IMEI No.	Phone Number
1.	AHMEDABAD CITY(MC)	353032044157861	8991115047
2.	AHMEDABAD	353032044156657	8991115048
3.	AMRELI	353032044158232	8991115046
4.	ANAND	353032044161202	8991115043
5.	BANASKATHA	353032044160212	8991115042
6.	BHARUCH	353032044160295	8991115041
7.	BHAVNAGAR	353032044160618	8991115044
8.	DAHOD	353032044160709	8991115045
9.	DANG	353032044160774	8991115036
10.	DEVBHOOMI DWARKA	353032044160451	8991115037
11.	GANDHINAGAR	353032044161319	8991115038
12.	JAMNAGAR	353032044158612	8991115040
13.	JUNAGADH	353032044161442	89911 15039
14.	KHEDA	353032044160196	8991115034
15.	КАСНСНН	353032044159958	8991115035
16.	MEHSANA	353032044158828	8991115033
17.	NARMADA	353032044161350	8991115032
18.	NAVSARI	353032044158802	8991115031
19.	PANCHMAHAL	353032044157234	8991115030
20.	PORBANDAR	353032044157465	8991115029
21.	RAJKOT	353032044157556	8991115026
22.	SABARKANTHA	353032044157457	8991115027
23.	SURENDRANAGAR	353032044157564	8991115026
24.	SURAT	353032044145353	8991115024
25.	SURAT CITY	353032044146609	8991115025
26.	ТАРІ	353032044146823	8991115023
27.	VADODARA CITY	353032044144729	8991115022
28.	VALSAD	353032044146617	8991115021
29.	SEOC	353032044044648	8991115020
30.	CEO-GSDMA	353032044043954	8991115019
31.	JAMNAGAR MC	353032044044655	8991115018
32.	JUNAGARH MC	353032044043889	89911 15017
33.	RAJKOT MC	353032044043608	8991115016
34.	BOTAD	353032041746302	8991115049
35.	ARVALLI	353032040819159	8991115050
36.	PATAN	353032041844156	8991115051
37.	VADODARA	353032041433604	8991115052
38.	GIR SOMNATH	353032041424710	8991115053
39.	CHOTTAUDEPUR	353032041844461	8991115054
40.	MORBI	353032040543395	8991115055

#### Annexure: 8 Fire Facility at MAH unit

### ✤ Fire Fighting Facilities At Major Accident Hazard Units :

Sr. No.	Name	Phone1	Phone2	Fire Tenders	Water (m3)	Fire E Suits	Fire P Suits	Water Hoses
1	GSFC Ltd. – Sikka	0288	2344100	2		-	1	20
	Unit	2432200						
2	RIL / SEZ / RPTL -	0288	2312157	12	156000	1	2	800
	Motikhavdi	2310000		+1Rescue				
3	TCL - Mithapur	02892	223207	2	Sea	0	1	12
		665247			water			
4	Essar Oils Ltd.	02833	Fax	1	60000	0	1	72
	Vadinar	661444	241414					

### \* Resources Available at Fire Stations:

Sr. No.	Name	Phone	Manpo wer	Number of Fire Tenders	Ambulance	Fire Suits	SCBA
1	GSFC Ltd. – Sikka Unit	0288	12	2	1	2	4
		2432200					
2	RIL /SEZ / RPTL -	0288	28	12+	4	2	120
	Motikhavdi	2310000		rescue			
3	TCL - Mithapur	02892	8	2	1	1	6
		665247					
4	Essar Oils Ltd. Vadinar	02833	8	5	3	2	65
		661444					

### Annexure: 8 Fire Facility at MAH unit

## **\***

### \* Medical facilities at MAH units

Sr			Amb.	онс	First	Stret-	Availa	bility of	Details of other
No	Name	Phone	Van	5bed	aid boxes	Cherg 4		Nurses	facilities/equipment
	GSFC Ltd.	0288	1	Y	2	2	Y		Oxy. Cyl Set - 1
	Sikka Unit	2432200							Stethoscope - 1, Baloon
		2344100							type respirator - 1, Self
									care kit - 1, Blood pres.
									measuring equipment – 1
	Tata Chem.	02892	2	Y	4	4	Y	Y	Oxy. Cyl Set - 1,
	Ltd.Mithapur	665247							SBS Sets - 3,
									Stethoscope - 1,
									Baloon type respirator -
									1, Peak flow meter - 1,
									Self care kit - 1, Blood
									pres. measuring
									equipment – 1
									Comp.Blood Test Lab.
3	Essar Oils	02833	3	Y	50	10	Y		Oxy. Cyl Set - 1
	Ltd.	661444							Stethoscope - 1, Baloon
									type respirator - 1,
									Self care kit - 1, Blood
									pres. measuring
									equipment – 1

### Annexure: 8 Fire Facility at MAH unit

### Personal Protective Equipment Available at Major Accident Hazard Units:

Sr No	Name	Phone No	SCB A	Canister Masks	Full Body PVC Suit	Air line BA	Chem. Splash suit	Emergency Kit	Water Gel
1	GSFC Ltd.	0288	20	25	15	15	2	-	4
	Sikka Unit	2432200							
		2344100							
2	RIL/SEZ/	0288	120	200	50	4	2	1	4
	RPTL	2310000							
	Motikhavdi	2319922							
3	TCL	02892	6	50	4	4	4	4	-
	Mithapur	665247							
4	Essar Oils	02833	65	20	2	5	2	-	2
	Ltd.Vadinar	661444							

#### Annexure: 9 Other Facility at MAH unit

### Special Resources available at MAH Unit

### **Tata Chemicals Limited-Mithapur**

Sr.no.	Details of Equipment	Quantity	Capacity	Contact Person Name	Contact Numbers
1	Portable Inflatable light	1	-	Paresh Patel, Fire Safety	9227194092
2	Mini Fire tender(Water cum Foam)	1	-	Depatment	
3	Life jacket	15			
4	Life Bouy	12			
5	Dewatring Pump	2			

### Nayara Energy- Vadinar

Sr.no.	Details of	Quantity	Capacity	Contact Person	Contact
	Equipment			Name	Numbers
1	Water Brouser	1	-	Fire Control	9979868424
2	Life jacket	6	-	Room	
3	Life Bouy	6			
4	Rope	2			
5	Dewatring Pump	1			

### Cairn India-Bhogat

Sr.no.	Details of Equipment	Quantity	Capacity	Contact Person Name	Contact Numbers
1	Portable Inflatable light	1	-	Basavraj Girimath, DGM	9662539598
2	Mini Fire tender(Water cum Foam)	2	-		
3	Life jacket	10	-		
	Life Bouy	2	-		
4	Rope	4	30M*2 15M*2		
5	Dewatring Pump	4	-		
6	Boat	1	-		

### **IOCL-Vadinar**

Sr.No.	Details of	Quantity	Capacity	Contact Person Name
	Equipment			
1	Portable Inflatable	2	-	Shri R.D. Shrivastava, GM
	light			9712996635
2	Mini Fire tender	3	-	Shri Kundan Kumar, AM
3	Water Brouser	1	20 KL	7894448751
4	Life jacket	20	-	
5	Life Bouy	30	-	
6	Dewatring Pump	2	-	
7	JCB	Available	-	
		on		
		contract		
8	Lodar truck	Available	-	
		on		
		contract		
9	Tractor	Available	-	
		on		
		contract		
10	Ambulance	1	-	

### **RSPL (Dhari Detergent)-Kuranga**

Sr.No.	Details of Equipment	Quantity	Capacity	Contact Person Name
1	Fire tender	1	-	Mr. Brijesh Shaw
2	Rope	10	-	6359779635
3	Dewatring Pump	1	-	
4	JCB	1	-	Mr. Jaydeep Singh
5	Loader	1	-	6359779601
6	Truck	1	-	

#### Annexure: 10 Chemical and their Antidotes

Details Of Chemicals Properties, Fire Fighting Agents, Antidotes, First Aid & Medical Treatment :

Sr No	Name Of Chemical	Hazard Chara- cteristics	Fire Fighting Agent	Antidote / First Aid / Medical Treatment
1	Acetic Acid	Corrosive	Carbon Dioxide, Dry Chemical Powder, Water Spray and Alcohol Resistant Foam	Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. If heartbeats are absent, give external Cardiac compression. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open and obtain medical treatment urgently.
2	Ammonia	Flammable, Toxic	Stop flow of gas, use water spray to cool fire exposed containers. Exposed fire fighter must wear positive pressure self-contained breathing- apparatus and full protective clothing.	Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. Inhalation of steam or vinegar vapour is recommended. If substance has gone in eyes, wash with plenty of water for 15 minutes To relieve restlessness, ingestion morphine 15mg to relieve Dypspnoea, Oxygen inhalation.
3	Ammo- niam Carbonate	Corrosive	Non-flammable	Remove the victim to fresh air. If there is a difficulty in breathing, give Oxygen. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open.
4	Ammonia Nitrate (Melt)	-	Use plenty of water to cool fire exposed containers. Exposed fire fighter must wear positive pressure self-contained breathing apparatus and full protective clothing. Container may explode in fire.	In case of burns due to hot Ammonium Nitrate solution, part should be flushed with large quantity of water and treated according to usual burns.
5.	Carbon Dioxide	Asphy-xiant	Non-flammable	It is simple asphyxiant and can cause oxygen deficiency in confined space / non ventilated areas. Respiratory protection is required.
6.	Carbon	Flamm-able,	Carbon	Remove the victim to fresh air. If there is a
	Monoxide	Toxic	monoxide, dry	difficulty in breathing, give oxygen. If

			chemical powder, wear self contained breathing apparatus. Let fire burn, shut off gas while using the chemicals.	hearts beats are absent, give external cardiac compression. Do not use mouth to mouth ventilation. Administer 100% oxygen till carboxyhemoglobin level is measured Cerebral edema and convulsions must be controlled. Ethylene blue must not be injected.
7.	Chlorine	Toxic	Non flammable	Remove the victim to fresh air. If there is a difficulty in breathing, give external cardiac compression. In case of eye exposure, wash with copious amount of water for 15 minutes, keeping eyelids apart
8.	Coal	Flamm-able	Dry chemical powder, water supply	Incomplete combustion may produce CO1 suphur dioxide, hence respiratory protectior may be required to fight the fire.
9.	Formic Acid	Flamm-able, Corrosive	Carbon dioxide, dry chemical powder, water spray and alcohol resistant, foam all purpose foam.	Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. If hearts beats are absent, give external cardiac compression. If substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open and obtain medical treatment urgently.
10.	Fuel Oil	Flamm-able	Carbon dioxide, dry chemical powder, foam	Remove the contaminated clothes. Wash the affected parts of skin with plenty of soar and water and seek medical advice immediately for inhalation of vapors fumes.
11.	High Speed Diesel	Flamm-able	Dry chemical powder, foam	- do -
12.	Hydro- chloric Acid	Corrosive	Non flammable	Remove the victim to fresh air. If there is a difficulty in breathing, give artificia respiration. Do not give alkaline substances or carbonate preparation. Skin should be treated with 5% Trietanol amine. It substance has gone in eyes, wash with plenty of water for 15 minutes, holding eyes open and obtain medical treatment urgently.
13.	Hydrogen	Flamm-able, Explosive	Dry chemical powder, halon. Let fire burn under control. Stop flow of gas.	It is simple asphyxiant and can cause oxygen deficiency in confined space / nor ventilated areas. Move victim to the fresh air and apply resuscitation methods.
14.	Hydrogen Iodide	Toxic	Non flammable	Remove the victim to fresh air. If there is difficulty in breathing, give oxygen. If hea beats are absent, give external cardi compression. Incase of eye exposure, wa with copious amount of water for 15 minute
				keeping eyelids apart.

	Sulphide	Toxic	dry chemical	difficulty in breathing, give oxygen. Patier
	~~		powder. Wear	with significant exposure, should b
			self-contained	hospitalized for 72 hours of medica
			breathing	observation for delayed pulmonary edema
			0	The respiratory centre may be stimulated b
			apparatus. Alcohol resistant	
				injection of LOBGIN and nike thamide
			foam is also	Victamin C may be injected intravenously
			advisable to be	Incase of eye exposure, it should be treate
			used to stop fire.	with boric acid solution.
16	Iodine	Toxic	Use water spray	Remove the victim to fresh air. If there is
			or carbon dioxide.	difficulty in breathing, give oxygen. If hear
			Do not use foam	beats abosent, give external cardia
			or dry chemical.	compression. Patient with signification
			Wear full	exposure should be hospitalized for 72 hou
			protective	of medical observation. Consider
			clothing and self	
			contained	topical steroid hormon or 30 mg/kg of methy
			breathing	prednisolone IV.
			apparatus for fire	
			fighting.	
17.	LPG	Flamm-able,	Carbon dioxide,	Remove the victim to fresh air. If there is
1/.	LFU			
		Explosive	dry chemical	difficulty in breathing, give oxygen.
			powder, water	substance has gone in eyes, wash with plent
10			spray	of water for 15 minutes holding eyes open.
18.	Methane	Flamm-able,	Carbon dioxide,	Remove the victim to fresh air. If there is
		Explosive	dry chemical	difficulty in breathing, give oxygen.
			powder. Shut off	substance has gone in eyes wash with plent
			gas.	of water.
19.	Methanol	Flamma-ble,	Carbon dioxide,	Remove the victim to fresh air. If there is
		Toxic	dry chemical	difficulty in breathing, give oxygen. Neve
			powder, water	administer anything by mouth if a victim
			spray and alcohol	losing conciousness. Do not induce vomiting
			resistant foam.	Do not use mouth to mouth respiration
				Massive alkalization in life saving and ey
				saving measures. Give small quantity of Ethy
				alcohol every 4 hourly. If substance has gor
				in eyes, wash with plenty of water for 1
				minutes holding eyes open.
20.	Methyl	Flamma-ble,	Carbon dioxide,	Remove the victim to fresh air. If there is
20.	Acetate	Toxic	,	
	Acetate	TOXIC	dry chemical	difficulty in breathing, give oxygen.
			powder and	substance heart beats are absent, give extern
			alcohol resistant	cardiac compression. If substance has gone i
			foam. Water may	eyes, wash with plenty of water for 1
			be ineffective.	minutes holding eyes open and obtain medica
				treatment urgently.
21	Methyl	Flamma-ble,	Carbon dioxide,	Remove the victim to fresh air. If there is
	Formate	Toxic	dry chemical	difficulty in breathing, give oxygen.
			powder, water	substance heart beats are absent, give externa
			spray and alcohol	cardiac compression. If substance has gone i
			resistant foam.	eyes, wash with plenty of water for 1
				minutes holding eyes open and obtain medica
				treatment urgently.

22 23	Methyl Iodide Mono	Toxic Flamm-able,	Non flammable Carbon dioxide,	Remove the victim to fresh air. If there is difficulty in breathing, give oxygen. Is substance heartbeats are absent, give external cardiac compression. Do not use mouth to mouth ventilation. Keep under medical sureillance for 48 hours. Consider administration of multiple metered doses of topical stercoid by inhalation and or upto 3 mg / kg of methyl prednisolone. Incase of eye, contact immediately, refer to opthalmologist. Remove the victim to fresh air. If there is
	Ethylene Glycol	Toxic	dry chemical powder and alcohol resistant foam.	difficulty in breathing, give oxygen. I heartbeats are absent, give external cardia compression. If substance has gone in eyes wash with plenty of water.
24	Naphtha	Flamm-able	Foam dry chemical powder, carbon dioxide. Apply water fog from as far distance as possible.	Remove the victim to fresh air. If there is difficulty in breathing, give oxygen. The decision of whether to induce vomiting or no should be made by an attending physician. heartbeats are absent, give external cardia compression. If substance has gone in eye wash with plenty of water.
25	Natural Gas	Flamm-able	Stop flow of gas. Dry chemical powder, carbon dioxide.	Remove the victim to fresh air. If there is difficulty in breathing, give oxygen. substance has gone in eyes, wash with plent of water for 15 minutes, holding eyes open.
26	Nitric Acid	Corrosive, Toxic	Non flammable	Remove the victim to fresh air. If there is difficulty in breathing, give Oxygen. Do no induce vomiting. If heartbeats are absent, give external Cardiac compression. If substant has gone in eyes, wash with plenty of wate for 15 minutes, holding eyes open and obtain medical treatment urgently.
27	Nitric Oxide	Corrosive, Toxic	Non flammable	Remove the victim to fresh air. If there is difficulty in breathing, give oxygen. Do no allow to walk. Fatal symptoms may be delayed upto 48 hours even though viction may seem normal after exposure. If hear beats are absent, give external card compression. If substance has gone in eye wash with plenty of water for 15 minute holding eyes open and obtain medic treatment urgently. Methemoglobinemia du to no resolve in hours with oxygen therapy.
28	Nitrogen	Asphy-xiant	Non flammable	Remove the victim to fresh air. If there is difficulty in breathing, give oxygen. If hear beats are absent, give external card compression. Treat for frostbite with lukewarm water.
29	Oxygen	-	Non flammable	Inhalation of 100 % oxygen can cause nause dizziness, irritation of lungs, pulmonar

				1
				dema, pneumonia and collapse. Liquid
				oxygen will cause frostbite.
30	Nitrogen Dioxide	Corrosive, Toxic	Non flammable	Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen Enforce complete rest for 24 to 48 hours Incase of high exposure keep patien under medical observation for atleast 7 hours. Some individuals who has symptoms of acute exposure with of without edema, develop in immun reaction 10 days or 6 weeks after exposure. Symptoms include seven cough, cyanbosis (tuning blue) feven hypoxemia and X ray may show fin scattered nodes in the lungs an
				vulnerable to virus.
31	Pottasium Hydroxide	Corrosive Toxic	Non flammable	Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen. I substance heart beats are absent, give external cardiac compression. Incase of eye contact immediately refer for opthomological opinion. Treat skin burn conventionally.
32	Potta-ssium	Flamm-able,	Only dry chemic	al Remove the victim to fresh air. If there i
	Methoxide	Toxic	powder is allowed be used. In reacts wi water and CO2.	
33	Propionic Acide	Flamm-able, Toxic, Corrosive	Foam, dry chemic powder, carbo dioxide. Apply wast fog from as f distance as possible.	al Remove the victim to fresh air. If there on a difficulty in breathing, give oxygen.
34	Rhodium Triodide	-	Non flammable	Remove the victim to fresh air. Materic cause irritation of nose, throat and respiratory tract. Repeated exposure skin can cause allergic sensitilization Incase of eye contact, flush with plenty water for 15 minutes.
35	Sodium Hydroxide	Corrosive, Toxic	Non flammable	Remove the victim to fresh air. If there a difficulty in breathing, give oxyge Incase of eye contact flush with plenty water for about 15 minutes. Remove w clothese and wash affected area wi water & soap.
36	Sulphur Dioxide	Corrosive, Toxic	Non flammable	Remove the victim to fresh air. If there a difficulty in breathing, give oxygen. hearts beats are absent, give extern

37	Sulphuric	Corrosive,	p 5 b c v v v d	ardia compression. Atropic rhnitis an hayngitis may be treated by inhalation of % solution of sodium chloride, followe by inhalation of 5% solution of sodium hloride, followed by inhalation of itamin A. Incase of of eye contact, flus with 2% sodium bicarbonate solution rops of 2 to 3 % phedrine should be nstilled in the nose. Remove the victim to fresh air. If the
51	Acid	Toxic	with water to form large amount of heat and corrosive fumes. Do not use water to existing fire in the nearby area.	
38	Trichloro Ethylene	Flamm-able, Toxic	Carbon dioxide, dry chemical powder, water spray and alcohol resistant foam.	Remove the victim to fresh air. If the is a difficulty in breathing, giv Oxygen. Do not induce vomiting heart beats are absent, give extern Cardiac compression. If substance he gone in eyes, wash with plenty of wat for 15 minutes, holding eyes open an obtain medical treatment urgently.
39	Ortho Dichloro Benzene	Flame-able, Toxic	Foam dry chemical powder, carbon dioxide. Apply water fog from as far distance as possible.	Remove the victim to fresh air. If the is a difficulty in breathing, giv oxygen. In case of eye contact flue with plenty of water for about minutes. Remove wet clothes and war affected area with plenty of water.
40	Trichloro Acetyl Chloride	Corrosive, Toxic	Foam dry chemical powder, carbon dioxide.	will produce tears in the eyes an severe chemical burns. Move the person to fresh air. If not breathin perform artificial respiration. required, give oxygen. Wash the affected skin thoroughly with soap an water. Flush and irrigate eyes with copious quantity of water for atleast the minutes. Do not induce vomiting.
41	Acrylo- nitrile	Flamm-able, Toxic	Carbon dioxide, dry chemical powder	Remove the victim to fresh air. If the is a difficulty in breathing, give oxyge If the unconscious, crush an amylnitri ampule in a cloth and hold it under the nose for 15 seconds in every minute. In not interrupt artificial respiration durin this process.
42	Copper Comp-ounds	-	Non flammable	Remove the victim to fresh air. If the is a difficulty in breathing, give oxyge If heart beats are absent, give extern cardia compression. If substance h gone in eyes wash with plenty of wat for about 15 minutes, holding eyes ope

				and obtain medical treatment urgently.
43	Aniline	Flamm-able, Toxic	Foam, dry chemical powder, carbon dioxide	Remove the victim to fresh air. If the is a difficulty in breathing, give Oxyge Aniline is very toxic, if splashed of skin. It passes through the skin, causin methamoglobinemia. Antidotes methlyene blue. Incase of eye conta flush with plenty of water for minutes. Remove wet clothes and wat
44	Benzene	Flamm-able, Toxic	Foam, dry chemical powder, carbon dioxide	affected area with plenty of water. Remove the victim to fresh air. If the is a difficulty in breathing, give Oxyge Benzene is very toxic or if splashed of skin. Cronic exposure may lead leukemia. Incase of eye contact flue with plenty of water for 15 minute Remove wet clothes and wash affecto area with plenty of water.
45	Nitro- benzene	Flamm-able, Toxic	Foam, dry chemical powder, carbon dioxide	Remove the victim to fresh air. If the is a difficulty in breathing, give oxyge NB is very toxic if splashed on skin. passes through the skin causin methamoglobinemia. Antidote methylene blue. Incase of eye conta flush with plenty of water for about minutes. Remove wet clothes and wa affected area with plenty of water.
46	Phosgene	Corrosive Toxic	Non flammable	Remove the victim to fresh air. If the is a difficulty in breathing, give oxyge Phosgenen is very toxic incase inhalation. It has very low $TLV - 0$ ppm. Keep the person under observation for 72 hours for possibility of delaye effect. Incase of eye contact, flush with plenty of water for about 15 minute Remove wet clothes and wash affect area with plenty of water.
47	Toluene	Flamm-able, Toxic	Foam, dry chemical powder, carbon dioxide	Remove the victim to fresh air. If the is a difficulty in breathing, give oxyge Toluene is very toxic if splashed of skin. Incase of eye contact flush wi plenty of water for about 15 minute Remove wet clothes and wash affect area with plenty of water.
48	Di Nitro Toluenen	Flammable, Explosive	Use plenty of water to cool fire exposed containers. Exposed fire fighter must wear positive self contained breathing apparatus. Foam and dry chemical powder and carbon	Remove the victim to fresh air. If there is a difficulty in breathing, give oxygen Di Nitro Toluene is very toxic if splashed on skin. Incase of `eye contac flush with plenty of water for about 15 minutes. Remove wet clothes and wash affected area with plenty of water.

			dioxide can be used.	
49.	Metaol-uene Di Amine	Flamm-able, Toxic	Foam dry chemical powder, carbon dioxide. Apply water fog from as far distance as possible.	Remove the victim to fresh air. If there is a difficulty in breathing, give oxyger Metaoluene Di Amine is toxic, splashed on skin. Incase of eye conta flush with plenty of water for about 1 minutes. Remove wet clothes and was affected area with plenty of water.
50	Toluene Di Isocyanate	Corrosive, Toxic	Dry chemical powder, carbon dioxide. Do not apply water as it reacts violently with water at elevated temperature.	Remove the victim to fresh air. If the is a difficulty in breathing, give oxyge Toluenen Di Isocynate is very toxic inhaled In cause pulmonary edem TLV of TDI vapour is ver low i. 0.0005 ppm. If splashed on ski incauses sensitization of skin tissu Incase of eye contact, flush with plen of water for about 15 minutes. Remov wet clothes and wash affected area wi plenty of water.
51	Methyl Iodine	Toxic	Non Flammable	Remove the victim to fresh air. If the is a difficulty in breathing, give oxyge If heart beats are absent, give extern cardiac compression. Do not use mou to mouth ventilation. Keep und medical surveillance for 48 hour Consider administration of multip metered doses of topical stercoid aeros by inhalation and or upto 30 mg / kg methyl prednisolone. Incase of ey contact immediately, refer opthalmologist.
52	Chloro Sulphonic Acid	A poision to irritant, corrosive	Use DCP, foam if exposes to fire.	Remove victim to fresh air. If there is difficulty breathing, give oxygen. I not induce vomiting. Obtain medic treatment urgently.
53	Carbon Di Sulphide	Flamm-able, Explosive	Use DCP, CO2	Remove victim to fresh air. If there is difficulty breathing, give oxygen. In not induce vomiting. Obtain medic treatment urgently.
54	Etyhlene Oxide	Flamm-able, Carci-nogen	Use DCP	Remove victim to fresh air. If there is difficulty breathing, give oxygen. In not induce vomiting. Obtain medic treatment urgently.
55	Acephate Anilo-phose Ethion Phorate Quinal-phos	Non flamm- able	Use DCP, foam if exposed to fire.	Atropine sulphate in dose 2 – 4 mg f adult, 2 pam 1000 – 2000 mg / im.
56	Alachor Carbenda- zim Thiophanate	Non flamm- able	Use DCP, foam is exposed to fire	Inject 1 gm of Eralidioxime chloride I Do not induce vomiting if the inject poison is principally a hydrocarbo solvent.

	- M			
57	Mancozeb Thiram	Non flamm- able	Use DCP, foam is exposed to fire	Low toxicity, no specific treatment.
58	Allethrin Cyperm- ethrin Fevalrate	Toxic	Use DCP, foam is exposed to fire	The treatment is symptomic.
59	Alumi-nium Phosphate	Non flamm- able	Use DCP, foam is exposed to fire	Injection copper sulphate 0.25 gm.
60	Isopro-turon	Non flamm- able	Use DCP, foam is exposed to fire	Supportive treatment.
61	Hexa- conazole Propi- conazole	Non flamm- able	Use DCP, foam is exposed to fire	There is no specific antidotes and treats the victim symptomatically.
62	Propane	Flamm-able, Explosive	DCP, Water	First aid.
63	Butadine	Flamm-able, Explosive	DCP, Water	First aid.
64	Propylene	Flamm-able, Explosive	DCP, Water	First aid.
65	Styrene Monomer	Flamm-able	DCP, Foam compound	-
66	Phosphoric Acid	Corrosive	_	<ul> <li>Skin Contact: - Wash with clean water.</li> <li>Apply dry sterile dressing.</li> <li>Eye Contact: Through wash with clean water, apply denominate (novelize) drop (0.4%).</li> <li>Inhalation: Administer O2, Give him fresh drink water.</li> <li>Ingestion: Milk of magnesia, fresh egg, administer him oxygen.</li> </ul>

### Annexure: 11 Trained People in Flood Rescue

40.	Name	Designation	Office Address	Contact		
Sr No.		Designation		Office	Resident	
1	L. B. Zala	Pancha Sahayak	T.D.O. Office, Kalyanpur	02891 286223	9824318740	
2	R. J. Bhogayata	Supervisor	Mamlatdar Office, Kalyanpur	02891 286227		
3	D. V. Bela	Pancha Sahayak	T.D.O. Office, Kalyanpur	02891 286223	9974565770	
4	Digvijaysinh Jadeja	Volunteer	Khambhalia		9099653710	
5	Mayursinh Jadeja	Volunteer	Khambhalia		9687852272	
6	Padhiyar RasikLal	Volunteer				
7	Kartik B.Vara	Homeguard	Dwarka		9824401819	
8	Mukund B.Dudhrejiya	Homeguard	Dwarka		9979931744	
9	Rahul C.Gondaliya	Homeguard	Dwarka		9428986963	
10	Viral R.Gondaliya	Homeguard	Dwarka		9737254054	
11	Parag R.Jethva	Homeguard	Dwarka		7874123224	
12	Mohit S.Mehta	Homeguard	Dwarka		9723342433	
13	Abdul A.Manek	Homeguard	Dwarka		9276850404	
14	Omkarsinh J.Zala	Homeguard	Dwarka		9925585079	
15	Ashish J.Vara	Homeguard	Dwarka		9099576402	
16	Kiritbhai Vegad	GRT	Dwarka		8530256108	
17	D. B. Chaudhri	P.T. Teacher	Shri Hathi G.L. High School. At: Raval. Kalyanpur	02891 228244	02891 228814	
18	H. H. Nakum	P.T. Teacher	Shri Sharda High School. Bedak Road,	02833 232795		

			Khambhalia		
19	G. S. Kardiya	Staff	Nagarpalika, Dwarka	02892 234449	9725029843
20	D. B. Motivaras	Staff	Nagarpalika, Dwarka	02892 234449	9725029844
21	J. J. Kapdi	Staff	Nagarpalika, Dwarka	02892 234449	9725029842
22	V. M. Ker	Staff	Nagarpalika, Dwarka	02892 234449	8511157223
23	P. V. Bhatt	Staff	Nagarpalika, Dwarka	02892 234449	9725029587

#### Annexure: 12 HAM Radio Exam Passed

### \* List Of government official who had passed HAM radio exam:

Sr No	Regi.No	Class	Name	Office	Resi. Address	DoB	Other qualifica tion	Remarks
1	61	3	Sunil K. Thakar Steno English	Superintendent, G.G. Hospital, Jamnagar	4/5 Patel Colony, Road No.2, Jamnagar Ph.02882753835	15/03/61	B.Com	

### **\*** List of Civilian who had passed HAM radio exam:

Sr. No.	Regi .No	Name	Resi. Address	DoB	Other qualifica tion
1	4	Chandresh M. Mamtora Abil-Gulal, Solarium Road, Jamngar Ph.02882540085		08/08/71	D.Pharm B.Pharm
2	32	Dr. Urvish K. Joshi	Medical Campus, G.G. Hospital, Jamnagar	22/08/81	M.B.B.S. M.D.
3	57	Chandani P. Patel	"Ushadip" Panchavati Gaushala, Opp. Happy Home Pro. Store, Jamnagar	16/01/86	B.Sc.
4	Licen No. 3239 5	N.P.Mehta	"MATRUCHHAYA" ,Rajgor street- Jamnagar	6/11/75	S.Y.B.com

### Annexure: 13 NGO

Sr. No	NGO Name	Address	Contact person	Contact Number
1	Lions Club,Jam	Barchha	Sudhirpopatbhai	02833234070,
	khambhaliya	pado,gaytrinagar,khambh	vijaybhai	9426233660
		aliya	ktariya	9913699999
		5	5	9825488890
2	Ladies chamber	Ramnath society near	Nishaben	9712047956
_	of Commerce	vidhya Shankar temple,	Nakum	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		Khambhalia		
3	Shri Mahila	Navapara, Khambhalia	Prafulaben	02833-234323,-2833-
0	Mandal,	i (u ) upuru; i inuirionunu	Barcha	234322, 9825150636
	Khambhalia		Durenu	23 1322, 9023 130030
4	Medical Store	Aashish medical store	Hitesh D	9824327100
-	Association	nagar gate, Khambhalia	Gokani	7024327100
5	Loiness Club,	Shiv Dental near	Rekhaben	9904337420
5	Khambhalia	paleshawar temple,	Nakum	<i>77</i> 04 <i>33</i> 7420
	Kilalilullalla	Khambhalia	INAKUIII	
6	Satavara Samai		Nakum haribhai	0004204584
6	Satavara Samaj	Harshadpur, Khambhalia		9904294584
7	navi vadi	Near hug staties	valjibhai	0707050600
7	Yungester	Near bus station,	Rameshbhai	9727859600
0	Group	Khambhalia	motani	0005407505
8	Doctor's	Saket Hospital, Railway	Dr. Sumat	9825407535
	Association	station road, Khambhalia	Cheteriya	
			Dr. Shalini	
9	Jalaram Mandir	Jodhpur Naka bada	Natubhai	9998111233
	satsang mandal	gayatri nagar road,	Kundaliya	
	trust	Khambhalia		
10	Raghuvanshi	Mandvi Timbo,	Jominiben	9427775903
	Mahila mandal	Khambhalia	Motani	
11	Mahajan	Bhanvad	Nishitbhai	02896-232072,
	Panjrapol,		Sanghvi	9428126600
	Bhanvad			
12	Raghuvanshi	Bhanvad	Jayeshbhai	9427240278
	Social		raichura	
	Group,Bhanvad			
13	Jain Social	Bhanvad	Bharatbhai	9427771953
	Group		Shah	
14	Govardhan	Bhanvad	Babubhai	9924949691
	goshala Mandali		Ramjibhai	
	800000000000000000000000000000000000000		Rathod	
15	Giriraj Seva trust	Raval, Kalyanpur	Gokani	9427259108
10	Shinaj Seva udst	itu vui, itur yun pui	Vinubhai	<i>&gt; 12123&gt;</i> 100
16	Swaminarayan	Deliya, Kalyanpur	Bhikhubhai	9825714516
10	transport	Denya, Kaiyanpui	Vadher	7023714310
17	FPS Association	Kalvannur	Devsibhai	9879358805
1/		Kalyanpur		2012220002
	Kalyaanpur		Hardasbhai	
10		TZ 1' TZ 1	Karangiya	0.40.6000100
18	Peacock	Kenedi, Kalyanpur	Narayanbhai	9426289192
	Conservation		Meramanbhai	
	Centre		Karangiya	

19	Godaldas Jamanadas Cheritable Trust	Bhatiya, Kalyanpur	Dwarkadas Raipura	02891-233155
20	Shri Mangalam Aashram and Cheritable Trust	Satapar, Kalyanpur	Gojiya Deva Sidabhai	9558187435
21	APMC Bhatiya	Bhatiya, Kalyanpur	Masribhai N Goriya	9426209561
22	Tata Chemicla for Rural development, Mithapur	Mithapur, Dwarka	H.N Kamani	02892-665367 9227891655
23	Gram Vikas trust	Near S.P. college Dwarka	Prof. D.S Ker	02892- 236551/236552 9824069942
24	Swami Narayan Temple, Dwarka	Dwarka	Shri Prem Jivan Swami	9979132332 9624863472
25	Shri Sharda math	Near bhojan house dwarka temple	Shri Chandrakant	02892-234230
26	Sarvodaya Mahila Mandal, Okha	Navi Bazar, Okha	Pushpa ben somaiya	9624463196
27	Dudheshwar Yuvak Mandal	Dwarka	Shri Kailash P Hindocha	9904421768
28	Prajapita Bhramkumari Ishwariya Vishwavidhyala ya	Near State Highway, Triolk darshan art galary	Smt Bhramkumari Shushmaben	9427445956

#### Annexure: 14 Resources

### <u>Resources available at Government offices</u> <u>1.Collector Office-Devbhumi Dwarka</u>

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1.	Inflatable light	03	1.Deputy Mamlatdar	02833 232125
			(Disaster Management)	
			2.D.P.O. (Disaster	+91 9407115141
			Management)	

### 2.Mamlatdar Office-Khambhaliya

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1.	Life Buoy	10	Mamlatdar-	02833-232804
2	Life Jacket	14	Khambhaliya	7567014800
3	Ropes 200 Ft.	01		
4	Generator	01		

### 3.Mamlatdar Office-Kalyanpur

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1.	Life Buoy	41	Mamlatdar-Kalyapur	02891 286120,
2	Life Jacket	21		+91 7567002729
3	Ropes 200 Ft.	02		
4	Ropes 100 Ft.	02		
5	Ropes 50 Ft.	02		
6	Generator	01		

### 4.Mamlatdar Office-Dwarka

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1.	Life Buoy	07	Mamlatdar-Dwarka	02892 234541,
2	Life Jacket	11		+917567012400
3	Generator	01		

#### 5.Mamlatdar Office-Bhanvad

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1.	Life Buoy	13	Mamlatdar-Bhanvad	02896 232116,
2	Life Jacket	14		+91 7567002729
3	Ropes 100 mt.	01		
4	Ropes 200 mt.	04		
5	Generator	01		

Sr.no.	Details of Equipment	Police Station	Quantity	Contact Person Name & Numbers
1.	Inflateble Light tower	Khambhaliya	2	02833-234735
		Dwarka	5	02892-234524
		Okha Marine	1	02892-262396
		Vadinar Marine	1	02833-256541
		Kalyanpur	2	02891-286222
2	Life Jacket	Dwarka	1	02892-234523
		Vadinar Marine	10	02833-256541
3	Life Bouy	Vadinar Marin	5	02833-256541
		Dwarka	5	02892-234523
4	Rope Ladder	Vadinar Marine	1	02833-256541
5	Rope	Vadinar Marine	1	02833-256541
6	Generator	Vadinar Marine	1	02833-256541

### 6.Police Departmrnt Devbhumi Dwarka

### **Resources available at Municipalities** 7<u>. Khambhaliya Municipality</u>

Grino	Datails of Fauinment	Quantity	Contact Darson Name	Contact Numbers
Sr.no.	Details of Equipment	Quantity	Contact Person Name	
1	Water Bouser	01	J. B Dagra	+91-9979887406
2	Fire Tender	02	-	
3	Inflateble Light tower	02		
4	Motorcycle mounted	01		
	water mist (Fire Bullet)			
5	JCB	01		
6	Ambulance	03		
7	Life Jacket	09		
8	Life Buoy	08		
9	Roap	05		
10	Roap Ladder	02		
11	Breathing Appratus	01		
12	Tracktor	04		
13	Electric cutter	01		
14	Hydrolic Cutter	02		
15	Bolt Cutter	01		
16	Inflatable Speed Boat	01		
17	Dewatering pump	01		
18	Cat Roap	05		
19	BC Fire Extinguisher	02		
20	ABC Fire Extinguisher	03		
21	Fire Suit	03		

### 8. Bhanvad Municipality

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1	Water Bowser	01	Tulshibhai Ghela-Driver	+91 9427444150,
				02896232159
2	Fire Tender	01	Narendrasinh Jadeja-	+91 9924866259,
			Driver	02896232159
3	Inflatable Light tower	02	Nagarpalika office-	02896232159
			Driver	
4	JCB	01	Indrajitsinh Jadeja-	+91 8460123863,
			Driver	02896232159
5	Loader	01	Manubhai Vaghela-	+91 99042
			Driver	83609,
				02896232159
6	Water tanker	05	Kishorchandra-Driver	+91 9726601640,
				02896232159

### 9.Dwarka Municipality

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1	Water Bouser	02	C.B Dudiya, Chief	+91-9725016543
2	Fire Tender	02	officer, Dwarka Nagar Palika	
3	Inflateble Light tower	02		
4	Extension Ladder	02	-	
5	Rope	15	-	
6	Rope Ladder	02		
7	Fire Bullet	01		
8	Lodar	02		
9	HDPE Rescue Boat	01		
10	JCB	01		
11	Dewatering pump	03	-	
12	Life Jacket	20		
13	Life Buoy	10	-	
14	Mini Tractor	12	-	
15	Generator	01		
16	Wooden Cutter	01		
17	Hydrolic Cutter	03		
18	Breathing Appratus	01		
19	Stretcher	01	-	
20	Minddi Roap(Dead body anchor)	04		
21	Safety Shoes	03		
22	Gum Shoes	06	1	
23	Boat Anchor	01	]	
24	Fire Suit	01		
25	Chemical Suit	02	]	
26	ABC Fire Extinguisher	05	]	
27	BC Fire Extinguisher	01		

# 10.Okha Municipality

Sr.no.	Details of Equipment	Quantity	Contact Person Name Contact Numbers
1	Water Bowser	01	C.B Dudiya, Chief Officer, Okha Nagar Palika
2	Mini Fire tender	01	+91-9725016543
3	Inflateble Light tower	02	
4	Fire Bullet	01	And
5	Fire speed Boat	01	Mandanbha N. Jagatiya-Fire In charge
6	Life Jacket	14	02892 262035, +91-82643 78101
7	Life Buoy	13	
8	Roap	05	
9	Dewatereing pump	04	
10	JCB	01	
11	Lodar	01	
12	Tractor	11	
13	Generator	03	
14	Ambulance	01	-
15	Safety Shoes	05	
16	Gum Shoes	04	-
17	Water Stretcher	01	-
18	Wooden Cutter	01	
19	Electric Cutter	01	
20	Petrol Cutter	01	
21	Breathing Appratus	01	
22	Fire Suit	01	
23	Chemical suit	01	

# **<u>11. Salaya Municipality</u>**

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1	Water Bouser	01	N.S Shekh, Chief Officer-	02899 285448,
2	Mini Fire tanker	01	Salaya	+91-9427054411
3	Inflateble Light tower	02		
4	Fire Bullet	01		
5	Ambulance	01		
6	Tracktor	04		
7	JCB	01	]	

8	Dewatering pump	02	

# **12.Raval Municipality**

Sr.no.	Details of Equipment	Quantity	Contact Person Name	Contact Numbers
1	Water Bouser	01	Mr. Gadhvi I/C Chief	+91-9979887921
2	Inflateble Light tower	02	officer- Rawal	
3	Tracktor	06		
4	Life Buoy	05		
5	Life Jacket	05		
6	Roap	01		
7	JCB	01	]	
8	Loder	01	]	

#### Annexure: 15 Resourcers of Health department

Sr. No.	Taluka	Name of CHCs	PHCs	SHC
1	Bhanvad	Bhanvad	5	35
2	Khambaliya	Salaya,	6	54
3	Kalyanpur	Kalyanpur, Raval	9	56
4	Dwarka	Dwarka	3	24
Total	1	5	23	169

# **\*** Taluka wise CHC,PHC,SHC of Devbhumi Dwarka:

# **Equipment with District Health Department**

	Equipment Detail, Year: 2020						
No	Name of Equipment	DH	SDH	СНС	РНС	ESSAR	
1	Ventilator	0	0	0	0	0	
2	O <sub>2</sub> Cylinder	0	8	18	11	4	
3	Enchotrachal tube	0	37	2	1	1	
4	Laryngoscope	0	5	4	4	1	
5	Defibrication	0	0	3	0	1	
6	Refrigerator	0	5	7	25	1	
7	Lagrange Mask Airway	0	0	2	2	0	
8	Ambu Bag	0	6	16	15	1	
9	PPE (Personnel Prevention Examination) Kit.	0	76	119	58	1	
10	Pulse Oximeter	0	4	8	16	1	
11	ECG Machine	0	2	3	0	1	
12	Endotracheal tube	0	0	0	3	0	
13	Straturas	0	3	6	6	1	
14	Wheel Chair	0	5	8	11	1	
15	Pulse Monitor	0	4	3	1	0	
16	Cervical Collar	0	1	0	0	1	
17	Long Spring Board	0	1	1	0	0	
18	N <del>–</del> 95 Masks	0	229	318	109	10	

19	Autoanalyser	0	0	5	1	0
20	X <del>–</del> ray Machine	0	1	4	0	0
21	Generator	0	1	7	2	0
22	Invetor	0	0	4	17	0

#### Locations of EMRI 108 in Devbhumi Dwarka District

	EMRI – 108 detail						
Sr.No Taluka		Location	No. Of Ambulance				
1	Kalvappur	Kalyanpur	1				
2	Kalyanpur	Ran-Limdi	1				
3		Dwarka	1				
4		Mithapur	1				
5	Dwarka	Okha	1				
6		Okha (Boat Ambulance)	1				
7	Khambhaliya	Khambhaliya	1				
8	Bhanvad	Bhanvad	1				
9	Khambhaliya	JAKHAR PATIYA	1				

Human Resource				
	D	EVBHUMI DWARKA	-	
Human Resource	Sanction	Filled	Filled Per (%)	
MO - MBBS	23	22	96	
MO - AYUSH	19	19	100	
MPS	29	28	97	
FHS	32	26	81	
FHW	169	169	100	
MPW	167	163	98	
Lab. Tech	29	20	69	
Pharmacist	28	16	57	
ASHA	560	533	95	

	Annexure: 17 Health Department Team Formation							
	District Repid Response team-2019							
Sr.	Designation	Name	Address	0.66	Phone			
No				Office	Mobile			
1	CDHO	Dr.R.B.Patel	D.P.Devb humi Dwarka	02833- 235974	9099900607			
2	Microbiology Department	Dr.Twinkle Parmar	G.H. Khambhal iya	-	7016960358			
3	District Surveillance Officer (EMO)	Dr.R.B.Sutariya	D.P.Devb humi Dwarka	-	7069094821			
4	Entomologist/D MO	Dr.R.B.Sutariya	D.P.Devb humi Dwarka	02833- 235914	7069094821			
5	Medicine Department	Vacant						
6	Public Health Specialist (PSM) Department	Vacant						
7	Pediatric Department	Vacant						
	Taluka Rapid Respone Team							

# **Block: Khambhalia**

No	Name of Officer / Employee	Designation	Head Quatar	Phone No	
INO	Name of Officer / Employee	Designation	Head Quatar	Office	Mob / Resi
1	Dr. Denish Masru	Medical Officer	Khambhalia	-	9426716200
2	M.S.Ambaliya	I/C TMPHS	Khambhalia	-	9727583291
3	P.M. Pindariya	Phramisist	Khambhalia	-	9662720499
4	Vipul Chauhan	MPHW	Khambhalia	-	9265144226
5	Sonalben Makawana	FHW	Khambhalia	-	7016478597
6	Dashrath Singh	Driver	Khambhalia	-	9879524288
Val.	ala Na CI 27 D 2259				

Vehicle No. GJ 37 P 2258

# **Block: Bhanvad**

	Name of Officer / Employee	Designation	Head Quatar	Phone No			
No	Name of Officer / Employee	Designation		Office	Mob / Resi		
1	Dr. Rahul Gagliya	МО	Pachtar	02896- 275217	7573029691		
2	Yogesh Makwana	Phramisist	Modpar	02896- 271640	9510988648		
3	J.V. Sitapara	THV	Bhanvad	02896- 232040	7567879711		
4	D.M Parmar	TMPHS	Bhanvad	02896- 232040	9727782090		
	149						

5	H.K. Rathod	MPHS	Gunda	02896- 234557	9727782089
6	M.P Chatral	MPHW	Rojiwada	02896- 234557	7573996465
7	V.M. Dabhi	MPHW	Bharatpar	02896- 232040	7573996486
8	R.D.Ravaliya	FHW	Shiva	02896- 244340	7567879715
9	H.C. Khandghar	FHW	Timbdi	02896- 232040	7069094824
10	Viral Solanki	Driver	Bhanvad	02896- 232040	9925727727
Veh	icle No.: GJ-10-TV-2754				
	Block: Kalyanpur				
No	Name of Officer / Employee	Designation	Head Quatar	Ph	ione No
110	Name of Officer / Employee	Designation	Heau Quatai	Office	Mob / Resi
1	Dr. Prakash J Chandegra	МО	Ran	-	7567879244
2	Karshan Gojiya	Pharmacist	Lamba	02891- 285270	9998676464
3	N K Khandhar	TMPHS	Bhatiya	02891- 286005	757399619
4	B H Kanzariya	MPHS	Gadhaka	02891- 275430	757399619
5	Geetaben Chavada	FHW	Kalyanpur	02891- 286005	756787925
6	Pravin Bhai	Driver	Kalyanpur	-	940917823
	Block: Dwarka			Ph	none No
No	Name of Officer / Employee	Designation	Head Quater	Office	Mob / Res
1	Dr. Jaysukh Nakum	МО	Tupani	02892- 234048	635709315
2	Urmila Sadiya	Pharmacist	Varvala	-	798415934
3	K.K. Vasjadiya	MPS	Varvala	02892- 234075	990904551
4	M.M. Chavada	TMPS	Dwarka	02892- 234048	990904552
5	K N Chandarana	MPHW	Tupani	02892- 234048	990967107
6	Shital Gad	FHW	Varvala	02892- 234048	635988915
	Magulukhhai Chadiwa	Driver	Varvala	02892- 234048	997483443
7	Mnsukhbhai Ghediya			234040	
-	icle No. GJ 18 G 8369			234048	

# Annexure: 18 Taluka Wise Swimmer list

SrN		Village /			Working	
0	Swimmer Name	City	Address	Mo. No.	place	Taluka
			Maruti Nagar,			
_	Hanif Hasam		behind Railway			
1	Sandhar	Okha	station	9904137848	-	Dwarka
•	Abdul karim	011	Near Ice palnt,			
2	Sandhar	Okha	Gandhinagri	9723686430	-	Dwarka
			Near Datarana			
2	Sakar Amadbhai	011	chilla,	0707660171		
3	Baloch	Okha	Gandhinagari	9737660171	-	Dwarka
4	Akbar Harun	Aarambhad	Children 1	0(207025(0		David
4	Sandhar	a	Chikhli	9638723568	-	Dwarka
			Maruti Nagar,			
5	Aaiyud Hanif	Okha	behind Railway station	7622025107		Duverla
5	Sandhar	Oklia	Near Hunuman	7623935107	-	Dwarka
	Deiek eernh		temple, Gandhi			
6	Rajak aayub sandhar	Okha	• ·	9804033238		Dwarka
0	Tajuddin	OKIIa	nagri	9804033238	-	Dwarka
	Aallharakh	Nana				
7	Sandhar	Ambla	Khambhalia	9723427848	_	Khambhalia
/	Sandhai	Khambhali	Kildinonana	7723427848	-	Kilailiollalla
8	Karni Abubhai	a	Khambhalia	9228836872	_	Khambhalia
0	Anvar Umarbhai	Khambhali	Kildillollalla	7220030072		Rhambhana
9	Jojiya	a	Khambhalia	9275177088	_	Khambhalia
,	Mahendra	Khambhali	Tinumonunu	213111000	Nagarpalik	Tunumonunu
10	Vasram Chopda	a	Khambhalia	9925009241	a	Khambhalia
10	Jaypal Singh	Khambhali	Tinumonunu	<i>&gt;&gt;2000&gt;2</i> 11	Nagarpalik	Tinumonunu
11	Jadaja	a	Khambhalia	7990663308	a	Khambhalia
	Ismile kasam		Behind Old			
12	sandhar	Okha	Market,,Okha	8347589936	-	Dwarka
	Mo. Yakub	Aarambhad	Rabari pado,			
13	Abdul Khetara	а	aarambhada	7600138286	-	Dwarka
			Near Office			
	Hamid Hasam		plant,			
14	Sandhar	Okha	Gandhinagari	7359377711	-	Dwarka
	Aamin Karim	Aarambhad	<u> </u>			
15	Sandhar	а	Chikhli	7704133805	-	Dwarka
	Firoj Akbar		Near Ice palnt,			
16	Sandhar	Okha	Gandhinagri	8347150200	-	Dwarka
	Rajak aayub	Aarambhad	Near New gate,			
17	sandhar	a	Aarambhada	8624311851	-	Dwarka
	Ramjan Mamad	Aarambhad	Near New gate,			
18	Sandhar	a	Aarambhada	9824682017	-	Dwarka
	Nur Mamad		Near Ice palnt,			
19	Karim Sandhar	Okha	Gandhinagri	9714904942	-	Dwarka
	Ismile /karim		Near Ice palnt,			
20	Sandhar	Okha	Gandhinagri	9824485227	-	Dwarka

21	RAMSHIBHAI NATHUBHAI	Dunamora	Rupamora, Ta Bhanvad	9924866259	Dunamora	Bhanvad
21	KARUBHAI	Rupamora	Difativau	9924000239	Rupamora	Dilativau
22	PANCHOLY	Bhanvad	Ranjitpara	8460123863	Ranjitpara	Bhanvad
23	J.H.JADEJA	Bhanvad	Darbar street	-	Bhanvad	Bhanvad
	S.S,CHELAVA					
24	DA	Bhanvad	Ranjit para	-	Ranjit para	Bhanvad
25	PUNJA MALDE	Bhanvad	Ranjit para	9924866259	Ranjit para	Bhanvad
26	K.M. JETHVA	Bhanvad	Ranjit para	8460123863	Rajit para	Bhanvad
20	GAFAR	Diantia	itunjit pulu	0100120000	rujit pulu	Difuit vuu
27	RINDANI	Bhanvad	Ghanchi street	9924866259	Bhanvad	Bhanvad
_,	MERAMAN	Diantia		>> <u></u>	Difuit vuu	Difuit vuu
28	RAVIDE	Bhanvad	Ghanchi street	8460123863	Bhanvad	Bhanvad
20	Harishbhai	Difuit vuu		0100123003	Difuit vuu	Difuit vuu
29	dudhrejiya	Rawal	Bus station area	9913029220	Raval	Kalyanpur
/	Harishbhai			>> <u>-&gt;=</u>		<u></u>
30	Kudecha	Rawal	Near bus station	9913029220	Raval	Kalyanpur
<u>30</u> 31	Rambhai Mistri	Rawal	Jamod street	9979291937	Raval	Kalyanpur
51	Karabhai	1		7717471751	1	isuryunpur
32	Rambhai Gami	Rawal	Mayurnagar	9925341415	Raval	Kalyanpur
54	Lakhubhai	1\avvai	iviayuinagai	7743341413	1\uvu	maryanpui
33	Makwana	Rawal	Near gaushala	9979054480	Raval	Kalyanpur
55	Wakwalla	Rawai		7777034400	Kavai	Karyanpur
34	Dayabhai Patel	Rawal	Vadi area	9879786037	Raval	Kalyanpur
	Sanjaybhai		Near sharif			
35	Vaghela	Rawal	ghanti	9904830990	Raval	Kalyanpur
	Nitin					
36	D.Kagadiya	Rawal	Near bus station	9033626728	Raval	Kalyanpur
	Rajeshbhai					
37	J.Kagadiya	Rawal	Khariyavad	9299045972	Rawal	Kalyanpur
	Rakesh					
38	m.Thanki	Rawal	Mayurnagar	9099059559	Rawal	Kalyanpur
39	kisor uauswami	Chachlana	Chachlana	9558436156	Chachalana	Kalyanpur
					At.kalyanp	<b>v</b> 1
40	MASiD bLOS	Kalyanpur	Atpkalyanpur	9998256756	ur	Kalyanpur
	Manoj					
41	P.Shingrakhiya	Rawal	Vankarvas	909945971	Rawal	Kalyanpur
	Narendrasinh					
42	Jadeja	Bhanvad	Bhanvad	9924866259	Bhanvad	Bhanvad
43	Indrajit P.Rathod	Bhanvad	Bhanvad	8460123863	Bhanvad	Bhanvad
44	sunil kanjariya	Kalyanpur	Main bazar	9428125433	Na	Kalyanpur
	··· j···-j···	J F			Dwarka	r
	Anavar Umar	Khambhali	Dwarka gate,		gate,	
45	Jokhia	a	khambhalia	9275177888	khambhalia	Khambhalia
					Near	
			Near jodhpur		jodhpur	
	Mansinh C	Khambhali	naka,		naka,	
46	Rathod	a	khambhalia	9428865669	khambhalia	Khambhalia
	Anavar Eliash		Bhim pado,		Bhim pado,	
47	Bhagad	Salaya	salaya	0	salaya	Khambhalia
-				-	···· ·· · · · · · · · · · · · · · · ·	

	1	I	Γ	T	Γ	Γ
	Ismail Abdul		Nalsanan nada		Nanakarar Dada	
48	Sumbhani	Salaya	Nakarar pado,	2833285327	Pado, Salaya	Khambhalia
40	Javed Ali	Salaya	salaya	2033203321	Nanabarlo	Kilailibilaila
49	Sanghar	Salaya	Salaya	9924695529	Vas, Salaya	Khambhalia
47	Sanghai	Salaya	Salaya	9924093329	Nabandar	Kilailiolialia
					Road,	
50	Junas Kasam	Salaya	Salaya	9924695529	Salaya	Khambhalia
50	Julius Kusulli	Buluyu	Suldyd	<i>yy2</i> (0) <i>352</i> /	Bandar	Txiluillollullu
					road,	
51	Bachu Sidiq	Salaya	Salaya	9724521961	salaya	Khambhalia
				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Banda	
	Farik Ismail				rooad,	
52	Sanghar	Salaya	Salaya	9714558814	salaya	Khambhalia
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			Coustom	
	Samim Adam				road,	
53	Bhaya	Salaya	Salaya	9998165813	salaya	Khambhalia
		-			Station	
	hanif junas				road,	
54	sanghar	Salaya	Salaya	9898572786	salaya	Khambhalia
					Station	
	Isha Ismail				road,	
55	Gajiya	Salaya	Salaya	9328078333	salaya	Khambhalia
	DAUD OSMAN				Vadinar	
56	SANGHAR	Vadinar	Vadinar	8238969191		Khambhalia
57	Bipinbhai	Vadinar	Vadinar	9427239025	Vadinar	Khambhalia
58	M I BHAYA	Bharana	Vadinar	9099593562	Vadinar	Khambhalia
59	K M BHAYA	Bharana	Vadinar	-	Vadinar	Khambhalia
60	J M BHAYA	Bharana	Vadinar	-	Vadinar	Khambhalia
	DJ		Bharana		Bharana	
61	CHAMDIYA	Bharana		9099593562		Khambhalia
	HARUN					
62	IBRAHIM	Bharana	Bharana	9099593562	Bharana	Khambhalia
	Jusab Kasam	~ .	~ .		~ .	
63	Chamadiya	Salaya	Salaya	9904137602	Salaya	Khambhalia
<i>C A</i>	Razak aliyas			00001 (170 )		771 11 1
64	Chaba	Salaya	Salaya	9898161784	Salaya	Khambhalia
65	Gani Haji Chaba	Salaya	Salaya	9724972439	Salaya	Khambhalia
~ ~	Gafar Musa	011		0.001550555	011	
66	Sodha	Okha	Bhunga vistar	9601550755	Okha	Dwarka
<b>C7</b>	Abbash Musa		Dhung' f	0624012110	Oble	David 11-1
67	Sodha	Okha Port	Bhunga vistar	9624013110	Okha	Dwarka
68	Haji Satar Shodha	Arombhada	Indira nagar, arambhada	0824412020	Okha	Dwarka
00	Kasam Daud	Arambhada		9824413039	Okha	Dwarka
69	Betara	Arambhada	Endira nagar, arambhada	9821691876	Okha	Dwarka
07	Mamad Ebrahim	Aramonaua	Endira nagar,	20210210/0	UNIA	
70	Vadha	Arambhada	arambhada	9824971019	Okha	Dwarka
10	Ali Mamad	manonaua	Endira nagar,	7024771017		
	All Mamad					

						1
70	Akbar Musa	Discussion		0704474650		Deventer
72	Sodha	Bhunga	Okha	9724474659	Okha	Dwarka
	Harun Abdulraheman					
73	Sodha	Okha	Navi nagri	9904083669	Okha	Dwarka
13	Esani Kasamhaji	Oklia	Navi nagri	9904083009	Oklia	Dwarka
74	Suleman	Dwarka	Rupen bandar, Dwarka	9824569836	Dwarka	Dwarka
/4	Esani Gulmamad	Dwarka	Rupen bandar,	9824309830	Dwarka	Dwarka
75	Haji	Dwarka	Dwarka	9879176612	Dwarka	Dwarka
15	Bahadur	Dwarka	Dwarka	9879170012	Dwarka	Dwarka
76	B.Sariya	Dwarka	Dwarka	9898717126	Dwarka	Dwarka
70	D.Sallya	Dwarka	Dwarka	7676717120	Dwarka	Dwarka
77	Idrish D.Modi	Dwarka	Dwarka	9879756560	Dwarka	Dwarka
78	Ashok T.Chanpa	Dwarka	Dwarka	8128151667	Dwarka	Dwarka
10		Dwalka	Rupen bandar,	012013100/	Dwarka	Dwarka
79	Kasam Jaku	Dwarka	Dwarka	9879176612	Dwarka	Dwarka
17			Birla colony,	7077170012		
80	Kirit B.Vegad	Dwarka	Dwarka	9638963421	Dwarka	Dwarka
00	MANDANBHA			7050705421	Dwarka	
81	NANDHABHA	Okha Port	Okha	8264378101	Okha	Dwarka
01	GAGUBHA	Okila I Olt	Okilu	0201370101	OMiu	Dwarka
82	MANEK	Okha Port	Okha	9737656101	Okha	Dwarka
	SATAR	Okha Port		7101000101	onnu	
83	SUMANIYA		Okha	9924028393	Okha	Dwarka
	VASRAM	Okha Port		,,,		
84	MOHAN	011111 010	Okha	8128150860	Okha	Dwarka
	ISWAR	Okha Port	Gaytri			
85	LAKHAMAN		nagar,Okha Port	7600541537	Okha	Dwarka
	RAMESH					
86	BABU	Arambhada	Okha Port	9879051712	Okha	Dwarka
	SURESH					
87	NARAN	Arambhada	Okha Port	9172118002	Okha	Dwarka
	DINESH					
88	LAKHA	Okha Port	Okha	9874833965	Okha	Dwarka
	BHUPAT					
89	MOHAN	Okhamadhi	Okha	9723841712	Okha	Dwarka
	NAYABHA					
90	MURUBHA	Surajkaradi	Okha	9824810156	Okha	Dwarka
	BHIMBHA					
91	DHADHABHA	Surajkaradi	Okha	9662583511	Okha	Dwarka
	DHIRAJ		Valmikivas,okh			
92	CHANA	Okha Port	a	9662789944	Okha	Dwarka
	Mandanbha					
93	Jagatiya	Okha	Okha	8264378101	Okha	Dwarka
0.4						
94	Kirit B.Vegad	Dwarka	Dwarka	9638963421	Dwarka	Dwarka
0.5	Vidhabhai			0400164264		
95	M.Ker	Dwarka	Dwarka	9408164264	Dwarka	Dwarka
06	Dabhi Hasmukh	D 1	Deres	01000000000	D 1	D 1
96	L.	Dwarka	Dwarka	8102622648	Dwarka	Dwarka

				-		
97	Hanif Hasam	Okha	Okha	9904137848	Okha	Okha
98	Abdul Karim	Okha	Okha	9723686430	Okha	Okha
99	Sakar Aamadbhai	Okha	Okha	9737660171	Okha	Okha
100	Akbar Harun	Okha	Okha	9638723568	Okha	Okha
101	Ayud Hanif	Okha	Okha	7623935107	Okha	Okha
102	Firoj Akbar	Okha	Okha	8347150200	Okha	Okha
103	AAmin Karim	Okha	Okha	7704133805	Okha	Okha
104	Ramjan Mamad	Okha	Okha	9824682017	Okha	Okha
105	Nurmamad Karim	Okha	Okha	9714904942	Okha	Okha
106	Ikbal Karim	Okha	Okha	9824485227	Okha	Okha
107	Rajak Ayub	Okha	Okha	9804033238	Okha	Okha
108	Tajudin Alarakha	Okha	Okha	9723427848	Okha	Okha
109	Ikbal Kasam	Okha	Okha	8347589936	Okha	Okha

#### Annexure: 19 Shelter management

As per instruction of a District collector or message for SEOC, DDO will do operation of relief and shelter with their staff, group members & their staff and maintain the records of areawise population, shelter centers in your area for effective emergency evacuation. Based on the warning issued by IMD, pin point the districts and villages likely to beaffected by Disasters and start the procedure for identifying safe places/shelters for evacuation in those villages. Generally, Schools and public buildings are given first priority for shelter because they are always available with facilities and at the time of disaster people can take shelter in these public buildings.

Shelter Management Team takes care of the identified shelter buildings in pre, during and post disaster scenario. Care needs to be taken to stock necessary material such as food, drinking water, medicines, bleaching powder, firewood, lantern, etc. Special care needs to be taken for the animal stock during any disaster. The team needs to ensure hygiene in and around the shelter place. Women are generally active members of the shelter team as they are well acquainted with house management, and are able to manage shelters during emergency. The team leader or any other team member should have the keys of the safe shelters so that prior to the disaster they will clean up the place and make available the necessary materials like food, water, medicines, bleaching powder, firewood, lantern, etc. required for the evacuees during disaster period. The most important action by the police is to cordon off the site of the accident, divert and regulate traffic, and evacuate/shelter in place citizens in close proximity on a priority basis.

Village wise data of safe sheltering for evacuation available on SDRN should be referred and the dist. Lision officers/Taluka level officers/Village level officers should be contacted to know the status of the shelters with the capacity of the shelter and other available facilities at the site. Arrange to shift evacuated persons to temporary shelters and ensure provision of food, water facilities, blankets and storage of relief materials.

Arrange for complaints regarding missing persons and initiate search in shelters, hospitals and police records. The villagers identify safe areas such as strong houses /buildings, raised platforms etc. These act as a shelter place for the people in the event of an evacuation. It would be be useful to identify the alternate approach routes which could be used during the time of an emergency.

Field visit to the affected areas and shelter/ relief camp sites and report preparation and forward to Collector for approval, sanction and onward action. Check the condition of safe shelter during his visits in the district places and if necessary gets it repaired by cocoordinating with the local authorities, available financial resources and voluntary organizations. Setting up relief camps and tents using innovative methods that can save time. Instruct local authorities to set up important telecom and other service related facilities. Initiate, direct and market procurement of food available from different inventories and ensuring food supplies to the affected population. Prepare take-home food packets for the families. Ensure distribution of relief material to the all the people including vulnerable groups of the target area such as women with infants, pregnant women, children, aged people and handicapped. Ensuring supports from all corners to Local Administration.

# Identified Temporary Shelter in Devbhumi Dwarka district

S No	Taluka	Number of Shelter
1	Khambhalia	127
2	Bhanvad	113
3	Kalyanpur	168
4	Dwarka	56
	Total	464

# Dos and don'ts of various disasters Cyclone Safety:

A cyclone is a storm accompanied by high-speed whistling and howling winds. It brings torrential rains.

#### Where does a cyclone come from?

A cyclonic storm develops over tropical oceans like the Indian Ocean and Bay of Bengal and the Arabian Sea. Its strong winds blow at great speed, which can be more than 118 kilometers per hour.

#### What are the visible signs of a cyclone?

When a cyclonic storm approaches, the skies begin to darken accompanied by lightning and thunder and a continuous downpour of rain.

#### How does a cyclone affect us?

- A cyclone causes heavy floods.
- It uproots electricity supply and telecommunication lines. Power supply shuts down and telephones stop functioning.
- Road and rail movements come to halt because floods damage rail tracks and breach roads. Rail movements are also disrupted because of communication failure.
- The inclement weather conditions also disrupt Air services. Seaports stop work due to high winds, heavy rains and poor visibility. Sometimes ships overturn or are washed ashore. The high-speed winds bend and pluck out trees and plants.
- A cyclone tears away wall sidings and blows off roofs of houses.
- Houses collapse and people are rendered homeless. In villages kacha houses get blown away. The speeding winds cause loose metal and wooden sheets to fly turning them to potential killers. Broken glass pieces can cause serious injuries.
- The floodwaters can take time to recede.
- The floodwaters can turn the fields salty.
- Bridges, dams and embankments suffer serious damages.
- Floods wash away human beings and animals and make water unfit for drinking. There can be outbreak of diseases like Cholera, Jaundice or Viral fever due to intake of impure water. Water gets contaminated because of floating corpses of animals and human beings and mixing of sewage stored food supplies, gets damaged.

#### Which areas are exposed to a cyclone in Gujarat?

In Gujarat, the Saurashtra-Kachchh region experiences a cyclone. The port towns of Veraval, Porbandar, Jamnagar, Dwarka, Okha, Kandla and Bhavnagar and other minor port towns suffer most.

#### Does a cyclone follow a particular path?

It is often difficult to predict where a cyclone will strike. When it starts moving from oceans (in Gujarat it is Arabian Sea) towards the land area, a cyclone can change track and hit areas other than those anticipated earlier.

#### Has any early warning system been evolved for the occurrence of a cyclone?

Yes. In India, the Indian Meteorological Department has developed a four-stage warning system for a cyclone.

#### How does the system operate?

This warning is about the possibility of a cyclone when a low pressure depression develops in oceans. For Gujarat, the development of such a depression in the Arabian Sea is indicative of a cyclone attack.

#### The Alert stage

This warning is given 48 hours prior to the time when a cyclone is expected to hit the land.

## The Warning stage

This is the stage when a cyclone gets formed. The warning is given 24 hours before the anticipated time of arrival of a cyclone.

## Cyclone arrival

This warning is issued 12 hours before a cyclone is due to hit the land. The warning gives information about cyclone and will continue until the winds subside. In sea ports, danger signal are hoisted about the impending cyclone.

#### From where can people access cyclone storm warnings?

Warnings about storms, their intensity and the likely path they may take are regularly broadcasted by radio and television network continuously until the storm passes over.

## What to do before and during a cyclone.

- Have your dwellings checked before a cyclone season starts and carry out whatever repairs that are needed.
- Talk to children and explain about cyclones without scaring them.
- Create storm awareness by discussing effects of a cyclonic storm with family members so that everyone knows what one can and should do in an emergency. This helps to remove fear and anxiety and prepares everyone to respond to emergencies quickly.
- Keep your valuables and documents in containers, which cannot be damaged by water.
- Keep information about your blood group.
- Keep lanterns filled with kerosene, torches and spare batteries. These must be kept in secure places and handy.
- Make plans for people who are either sick, suffer from disabilities, aged and children.
- Store up at least seven-day stock of essential food articles, medicines and water supply.
- Keep blankets & clothes ready for making beds. Also keep cotton bandages and several copies of photographs of family members in case they are needed for identification purposes after the storm.
- Store some wooden boards so that they can be used to cover windows.

- Keep trees and shrubs trimmed. Remove damaged and decayed parts of trees to make them resist wind and reduce the potential for damage. Cut weak branches and make winds blow through.
- All doors, windows and openings should be secured.
- Continue to listen to warning bulletins and keep in touch with local officials. Keep radio sets in working condition. Battery powered radio sets are desirable.
- Evacuate people to places of safety when advised.
- Take steps to protect your assets.
- Store extra drinking water in covered vessels.
- Remain calm.

## What one should not do during a Cyclone attack?

- During the storm do not venture out unless advised to evacuate.
- If you have a vehicle and wish to move out of your house, leave early before the onset of a cyclone. It is often best to stay at home
- Avoid remaining on the top floor of dwellings. Stay close to the ground.

# Earthquake safety:

- Tell the facts about earthquake to your family members
- Construct new buildings with earthquake resistant method and strengthen the old buildings
- Insure your house and family members
- Take the training for first aid and fire fighting
- Do not keep cots near the glass window
- Do not keep heavy and fragile things in the selves
- Do don't hang photo frames, mirrors, or glasses up your bed
- Keep your important documents, some cash and necessary articles ready in a bag
- Get your house insured before the earthquake
- Identify special skills of neighbor (medical, technical) so that it can be utilized in emergency

# **During Earthquake**

- Do not panic.
- If already inside, then stay indoors! Get under a heavy desk or table and hold to it.
- If fire breaks out, drop on the floor and crawl towards the exist
- If you are out doors during the quake, keep away from buildings, trees and electricity lines. Walk towards open places, in a calm and composed manner.
- If you are driving, quickly but carefully move your car as far out of traffic as possible and stop. Do not stop on or under a bridge or overpass or under trees, light posts, power lines, or signs. Stay inside the car until shaking stops
- If you are in a school, get under a desk or table and hold on

#### After the Earthquake

- Do not be afraid of the aftershocks
- Listen to radio-TV and other media for Government Announcement
- Check for injuries to yourself and those around you. Take first aid where you can
- Extinguish fire, if any
- Examine walls, floors, doors, staircases and windows to make sure that the building is not in danger of collapsing
- Do not enter into the unsafe or risky houses or buildings
- Inspect for Gas leaks-If you smell gas or hear blowing or hissing noises, open a window and quickly leave the building. Don't light your kitchen stove if you suspect a gas leak.
- Do not keep telephone lines busy unnecessarily
- Switch off electric lines

# Fire safety:

Do's

- Buy Fireworks from the licensed shop.
- Keep fireworks in a closed box
- Store crackers away from source of fire or inflammation
- Follow all safety precautions issued with the fire works
- Go to open spaces like playgrounds, fields
- Light them at arm's length using a taper.
- Stand back while lighting the crackers
- Discard used fireworks in a bucket of water
- Keep buckets of water and blankets ready, in case a firebreaks out.
- Wear thick cotton clothes for maximum safety from fire.
- If clothes catch fire, Stop, Drop and Roll
- In case of uncontrolled fire wrap the victim in a blanket, till it stop.
- In case of burns splash tap water (not ice water), the process may be repeated till the burning sensation reduces.
- If fingers or toes are burned, separate them with dry, sterile, non-adhesive dressings.
- Make sure the burn victim is breathing, if breathing has stopped or if the victim's airway is blocked then open the airway and if necessary begin rescue breathing.
- Elevate the burned area and protect it from pressure and friction.
- Cover the area of the burn with a moist sterile bandage, of clean cloth (do not use blanket or towel for healing burns).
- Consult the doctor as soon as possible for the proper medication
- Consult an ophthalmologist immediately in case of eye injuries.
- Do contact at the Fire Brigade (Tel.No. 101), for getting the details of the doctors on duty during the festival.

## Don'ts

- Don't burn crackers in crowded, congested places, narrow lanes or inside the house.
- Don't let children burst crackers unaccompanied by an adult
- Don't put fireworks in your pocket or throw them

- Don't cover crackers with tin containers or glass bottles for extra sound effect
- Don't dare to examine sunbursts crackers...leave it!! Light a new cracker
- Don't show the Dare-devilry of lighting crackers on own hands.
- Don't use fireworks inside a vehicle
- Avoid long loose clothes, as they are fast in catching fire
- Don't remove burnt clothing (unless it comes off easily), but do ensure that the victim is not still in contact with smoldering materials.
- Don't apply adhesive dressing on the burnt area.
- Don't break the burst blister

# Flood Safety:

## Do's and Don'ts after flood

- There is a possibility of spread of water borne diseases after flood, and hence medical treatment should be taken immediately.
- Do not enter deep, unknown waters.
- Do not go near the riverbank even after the floodwater has receded.
- Sprinkle medicines in the stagnant dirty water.
- Inspect your house for any cracks or other damage. Check all the walls, floor, ceiling, doors and windows, so that any chance of house falling down can be known and you can be aware about the immediate danger.
- If the floodwater has entered the house or has surrounded the house, then it is advisable not to enter such house.
- Keep listening to weather forecast on radio and television. Move to your residence only when instructed by the competent authority. It is not safe to believe that the problems have ended after the flood water have receded
- Inform the competent authority/officer for restoration of the necessary connections like gas, electricity, telephone, drainage, etc.
- Beware of the various insects or poisonous snakes that may have been dragged inside the house along with the floodwater.
- Destroy the food commodities that have been affected by floodwater.
- Check properly all the electric circuits, floor level furnace, boilers, gas cylinders, or electric equipments like motor pump etc. Check whether any inflammable or explosive item has not entered along with the floodwater.
- Switch off the main electric supply, if any damage is noticed to the electric equipments.
- If you find any breakage in the drainage system stop using latrines and do not use tap water.
- Do not use polluted water.
- Sewerage system should be checked and any damage should be repaired immediately so as to curtail spread of diseases.
- Empty the water clogged in the basement slowly with help of water pump so that damage to infrastructure can be minimized
- Check gas leakage which can be known by smell of gas or by hearing the sound of leakage; immediately open all windows and leave the house.
- Boil drinking water before usage and drink chlorinated water.

- Eat safe food.
- Rescue work should be undertaken immediately after flood situation as per the instruction. Do not follow any shortcut for rescue work.
- Do not try to leave the safe shelter to go back home until the local officials declare normalcy after flood and instruction to return home are not given.

## Tsunami:

The phenomenon Tsunami is a series of traveling ocean waves of extremely long length generated primarily by earthquakes occurring below or near the ocean floor:

# Following safety measures needs to be learnt before, during and after the occurrence of tsunami:

#### Before

- Be familiar with the tsunami warning signals. People living along the coast should consider an earthquake or a sizable ground rumbling as a warning signal. A noticeable rapid rise or fall in coastal waters is also a sign that a tsunami is approaching.
- Make sure all family members know how to respond to a tsunami. Make evacuation plans. Pick an inland location that is elevated.
- After an earthquake or other natural disaster, roads in and out of the vicinity may be blocked, so pick more than one evacuation route.
- Teach family members how and when to turn off gas, electricity, and water
- Children should be taught in advance about the evacuation plans
- Prepare emergency kit beforehand. The emergency kit should contain Flashlight and extra batteries, battery-operated radio and extra batteries, First aid kit
- Emergency food and water, Essential medicines etc

## During

- Listen to a radio or television to get the latest emergency information, and be ready to evacuate if asked to do so.
- If you hear a tsunami warning, move at once to higher ground and stay there until local authorities say it is safe to return home.
- Move in an orderly, calm and safe manner to the evacuation site
- Stay away from the beach. Never go down to the beach to watch a tsunami come in.
- If you can see the wave you are too close to escape it.
- Return home only after authorities advise it is safe to do so.

## After

- Stay tuned to a battery-operated radio for the latest emergency information.
- Help injured or trapped persons.
- Stay out of damaged buildings. Return home only when authorities say it is safe.
- Enter your home with caution. Use a flashlight/torch when entering damaged buildings. Check for electrical shorts and live wires. Do not use appliances or lights until an electrician has checked the electrical system.
- Open windows and doors to help dry the building.

- Shovel mud while it is still moist to give walls and floors an opportunity to dry.
- Check food supplies and test drinking water.
- Fresh food that has come in contact with flood waters may be contaminated and should be thrown out.

# Annexure: 21 General terminology used in weather or disaster bulletins

# Specification for description of rainfall:

INTENSITY OF RAINFALL	9	<b>हिन्दी</b> / ગુજરાતી
VERY LIGHT	0.1 TO 2.4 MM	बहुत हल्की वर्षा /
LIGHT	2.5 - 15.5 MM	हल्की वर्षा / ओछो वरसाह
MODERATE	15.6 - 64.4 MM	मध्यम वर्षा / भध्यभ वरसाह
HEAVY	64.5 - 115.5 MM	भारी वर्षा /
VERY HEAVY	115.6 - 204.4 MM	बहुत भारी वर्षा / ખૂબ ભારે વરસાદ
EXTREMELY HEAVY	≥ 204.5 MM	अत्यधिक भारी वर्षा / अत्यंत ભारे वरसाह
EXCEPTIONALLY HEAVY	WHEN THE AMOUNT IS A VALUE NEAR ABOUT THE HIGHEST RECORDED RAINFALL AT OR NEAR THE STATION FOR THE MONTH OR SEASON. HOWEVER, THIS TERM WILL BE USED ONLY WHEN THE ACTUAL RAINFALL AMOUNT EXCEEDS 12 CM	असाधारण भारी वर्षा / असामान्य ભारे વરસાદ

PROBABILITY OF OCCURENCE (%)	हिन्दी	ગુજરાતી
UNLIKELY	संभावना नहीं	શક્યતા નથી.
LIKELY	संभावित	શક્યતા છે.
VERY LIKELY	अधिक संभावना	વધારે શક્યતા છે.
MOST LIKELY	अत्याधिक संभावना	અત્યાધિક શક્યતા છે.

WARNING COLOUR CODES	हिन्दी	ગુજરાતી
WARNING (TAKE ACTION)	चेतावनी	ચેતાવણી
ALERT (BE PREPARED)	सतर्क रहें	સતર્ક રહ્યે
WATCH (BE UPDATED)	निगरानी रखें	ધ્યાન આપો
NO WARNING (NO ACTION)	कोई चेतावनी नहीं	કોઇ ચેતાવણી નથી

# Terminology for rainfall distribution:

OLD TERMINOLOGY	NEW TERMINOLOGY WITH	SPATIAL
OLD TERMINOLOGI	EFFETE FROM APRIL-1998	DISTRIBUTION
ALMOST ALL PLACES	ALMOST ALL PLACES	ABOVE 75%
AT MANY PLACES	AT MANY PLACES	51% TO 75%
AT A FEW PLACES	AT A FEW PLACES	26% to 50%
AT ONE OR TWO PLACES	ISOLATED	01% TO 25%

# Important weather forcast website:

- 1. www.imd.gov.in
- 2. www.imdahm.gov.in
- 3. www.accuweather.com
- 4. www.skymetweather.com
- 5. www.weather.gov
- 6. <u>www.noaa.gov</u>
- 7. worldweather.wmo.int
- 8. <u>www.usno.navy.mil</u>
- 9. <u>www.windy.com</u>
- 10. www.earth.nullschool.net
- 11. www.rsmcnewdelhi.imd.gov.in

# Criteria for classification of Cyclonic disturbances over the North Indian Ocean

Sr.	Type of disturbance	Associated maximum sustained wind (MSW)
1	Low Pressure Area	Not exceeding 17 knots ( <b>&lt;31 kmph</b> )
2	Depression	17 to 27 knots ( <b>31-49 kmph</b> )
3	Deep Deepression	28 to 33 knots ( <b>50-61 kmph</b> )
4	Cyclonic Storm	34 to 47 knots (62-88 kmph)
5	Severe Cyclonic Storm	48 to 63 knots ( <b>89-117 kmph</b> )
6	Very Severe Cyclonic Storm	64 to 119 knots ( <b>118-221 kmph</b> )
7	Super Cyclonic Storm	120 knots and above (≥222 kmph)

Note: 1 Knot is equal to 1.852 km.

## Annexure: 22 Aapda Mitra list

S No.	Name of Volunteer	Sex	Taluka	Village	Contact Number
	Volunteers trained in Aap	oda mit	ra Phase 2 t	raining Bat	ch-2019
1	Nilesh Kumar Pindariya	Male	Khambhaliya	Navi Fort	7016904607
2	Hinaben Valjibhai Nakum	Female	Khambhaliya	Khambhaliya	6352252244
3	Dhrangu Ajay Merubhai	Male	Bhanvad	Sanakhala	9662516538
4	Mahesh Baidiyavadara	Male	Bhanvad	Mota Kalavad	7284876421
5	Karangiya Ashwinbhai Ranmalbhai	Male	Bhanvad	Bhanvad	9724865165
6	Chetriya Bhaveshbhai Bhikabhai	Male	Bhanvad	Bhanvad	8200235766
7	Karmur Bhavesh Khimabhai	Male	Bhanvad	Bhanvad	9773474525
8	Karmur Bhavin Dosabhai	Male	Bhanvad	Bhanvad	9328245511
9	Himat M Ghoyal	Male	Bhanvad	Kalyanpur	9081689566
10	Savabha Budhabha Manek	Male	Dwarka	Varchu	9998212205
11	Tharcabha Budhabha Sumaniya	Male	Dwarka	Khatumba	9925237620
12	Rajubha Dhanabha Sumaniya	Male	Dwarka	Khatumba	9512558300
13	Shekh Sadam Hasambhai	Male	Dwarka	Dhinki	6353797695
14	Hasan Jusab Shekh	Male	Dwarka	Dhinki	9978137784
15	Kishan Manek Samyabha	Male	Dwarka	Dhanki	7990884971
16	Ravi Somabhai Singarkhiya	Male	Kalyanpur	Raval	9909306975
17	Jitesh Mohan Makwana	Male	Kalyanpur	Raval	6352965703
18	Jagdhish Aalabhai Chawada	Male	Kalyanpur	Bhatiya	7874684142
19	Ramabhai Nagabhai Vaghela	Male	Kalyanpur	Raval	8530855919
20	Bhavesh Ramsibhai solanki	Male	Kalyanpur	Raval	9712270816
21	Amit Chhaganbhai Singarkhiya	Male	Kalyanpur	Raval	6351022162
22	Pratap Dhirubhai Gami	Male	Kalyanpur	Raval	9913984327
23	Dharmeshbhai Sukabhai Gami	Male	Kalyanpur	Raval	6355424818
24	Paresh Panchabhai Vaghela	Male	Kalyanpur	Raval	9687944004
25	Vinod Vachibhai Singarkhiya	Male	Kalyanpur	Raval	8999013118

26	Rajesh Jenti bhai Makawana	Male	Kalyanpur	Raval	9974771006
27	Aartiben Bhagat bhai Gadhvi	Female	Kalyanpur	Bhogat	9099061604
28	Lilavatiben Soma bhai Katara	Female	Kalyanpur	Lamba	9586456460
29	Bhanuben Rukhdpari Goswami	Female	Kalyanpur	Gandhvi	9725859915
Ţ	Volunteers trained in Aar	da mit	ra Phase 1 t	raining Bat	ch-2018
30	Parmar Chandu Somabhai	Male	Bhanvad	Bhanvad	9879781745
31	Piparotar Suryakiran Khimabhai	Male	Bhanvad	Bhanvad	9998496174
32	Jogal Dilip Kanabhai	Male	Bhanvad	Bhanvad	8980642842
33	Mori Raju Punabhai	Male	Bhanvad	Bhanvad	9726929636
34	Sumaniya Subhash Nandabha	Male	Dwarka	Dwarka	9998825989
35	Rathod Mithun Rajpal	Male	Dwarka	Dwarka	9974136494
36	Nirmal Singh D Rayjada	Male	Dwarka/Okha	Okha	9739983034
37	Gagubha Gajubha Manek	Male	Dwarka/Okha	Okha	9737656101
38	Sagar K Manek	Male	Dwarka/Okha	Okha	9537779254
39	Hitesh Malade Kagadiya	Male	Kalyanpur	Raval	8264338030
40	Sanjay Hardasbhai Kagadiya	Male	Kalyanpur	Raval	9898834396
41	Satish K Kagadiya	Male	Kalyanpur	Raval	8264254399
42	Chavda Geetaben Arajanbhai	Female	Kalyanpur	Kalyanpur	9601437934
43	Puriben Ranmalbhai Chavada	Female	Kalyanpur	Kalyanpur	9725036172
44	Khira Basir Salim Bhai	Male	Kalyanpur	Raval	9664870354
45	Kagadiya Ravi Arajan bhai	Male	Kalyanpur	Raval	9687314625
46	Kagadiya Dinesh Jetha bhai	Male	Kalyanpur	Raval	9904650335
47	Kagadiya Keshu Ramsibhai	Male	Kalyanpur	Raval	9106043693
48	Chaki Imran	Male	Kalyanpur	Raval	9909445420
49	Piyushbhai P Nakum (H)	Male	Khambhaliya	Khambhaliya	9904966127
50	Harjug Vikrambhai	Male	Khambhaliya	Khambhaliya	9879870406
51	Bharatbhai S Kanjariya (H)	Male	Khambhaliya	Khambhaliya	9712215225
52	Nakum Arvind Muljibhai	Male	Khambhaliya	Khambhaliya	9601460803
53	Jod Rana Ashwinbhai	Male	Khambhaliya/ Salaya	Salaya	9067431810

## Annexure: 23 Siren Tower list installed by Civil Defense

# Dwarka Block (Okha)

Sr. No.	Location	Address
1	Dwarka Railway Station-Not Install	Dwarka City
2	Okha Railway Station-Not Install	Okha City
3	Fire station Dwarka	Dwarka City
4	Pri.School Dwarka, Nr.TV station	Dwarka City
5	Gram Panchayat Vasai	Vasai
6	Bet Nagar Panchayat Office	Beyt
7	Okha S.T. Depot	Okha City
8	Arambhada Gram Panchayat	Vill-Arambhada,Ta-Dwarka
9	Suraj Karadi Municipality Building	Surajkaradi-Dwarka
10	Mithapur Township High school	Mithapur-Dwarka
11	Shivrajpur Panchayat Office	Shivrajpur-Dwarka
12	Varvada Gram Panchayat Building	Vill-Varvada, Ta-Dwarka
13	Mojap Gram Panchayat Building	Vill-Mojap, Ta-Dwarka
14	Bhimrana Gram Panchayat Office	Bhimrana-Ta-Dwarka
15	Suraj Karadi Health Centre-Eye Hospital	Suraj Karadi
16	Rupen Port Primary school	Rupen, Dwarka
17	Bet Jetty	Okha
18	Guest House,PWD,Okha	Okha
19	Taluka School-3, Dwarka, Temple Road	Dwarka City
20	Civil Defence Unit Okha	Okha

## Khambhaliya Block

Sr. No.	Location	Address
21	Civil Defence unit Vadinar	Vadinar
22	Dhar Primary School Building	Vadinar
23	Singach Gram Panchayat Office	Singach
24	Zankhar Gram Panchayat Office	Zankhar
25	Bharana Primary School Building	Bharana
26	Kajurda Primary School	Kajudra
27	Nana Mandha Primary School	Nana Mandha
28	Mamlatdar office-Khambhaliya	Khambhaliya City
29	Taluka Panchayat Office	Khambhaliya City
30	Police Station-Milan Char Rasta	Khambhaliya City

# Annexure: 24 Talaties and Sarpanch Contact Number

Sr.No.		Taluka	Village	TalatiName	MobileNumber
1	1	KHAMBHALIA	Dharamapur	SONGARA JAYESH	82384 96383
2	2	KHAMBHALIA	Ramnagar	Gosai Alpesh Giri	8238496383
3	3	KHAMBHALIA	HARSHADPUR	Gosal Alpesh Giri	8238490383
4	4	KHAMBHALIA	Shaktinagar	NAKUM MUKESH	90672 49240
5	5	KHAMBHALIA	Bhadthar	MARIYA DINESH	96878 18750
6	6	KHAMBHALIA	BHARA BERAJA	MARITA DINESH	90878 18730
7	7	KHAMBHALIA	keshod	JANKIBEN BHUT	96625 37071
8	8	KHAMBHALIA	Thakar sherdi	JAM RANMAL	85116 20399
9	9	KHAMBHALIA	Bhinda	BARAD SAVDAS	95868 04889
10	10	KHAMBHALIA	LALUKA	BARAD SAVDAS	93808 04889
11	11	KHAMBHALIA	Bhan khokhari	DIPAK ANJARA	99245 63828
12	12	KHAMBHALIA	Sedha badathar	CHHETARIA RAMSHI	99742 68553
13	13	KHAMBHALIA	GOLAN SHERDI		99742 08333
14	14	KHAMBHALIA	kolva	NAGABHAI KANDORIA	94280 86016
15	15	KHAMBHALIA	ΚΟΤΑ		
16	16	KHAMBHALIA	BHAT GAM		
17	17	KHAMBHALIA	lalparada	BANDHIA RAJESH	9638146682
18	18	KHAMBHALIA	Juna tathiya		00122 40505
19	19	KHAMBHALIA	NAVA TATHIYA	N.N.DANGAR	
20	20	KHAMBHALIA	LALIYA	N.N.DANGAR	99132 40606
21	21	KHAMBHALIA	MANZA		
22	22	KHAMBHALIA	Moti khokhari	DIPAK ANJARA	99245 63828
23	23	KHAMBHALIA	Bajana	MAIDH BHAVNA	87593 80782
24	24	KHAMBHALIA	KANDORANA		87393 80782
25	25	KHAMBHALIA	Ambaradi		
26	26		AMBARADI	NANDANIA MANISHA	63598 51489
26	26	KHAMBHALIA	DEVARIYA		
27	27	KHAMBHALIA	Hapa lakhasar		
28	28	KHAMBHALIA	PIR LAKHASAR	TRIVEDI NEETA	88662 52951

Sr.No.		Taluka	Village	TalatiName	MobileNumber
29	29	KHAMBHALIA	Bhandariya		94600 67670
30	30	KHAMBHALIA	SAGARIYA	MARKHI NANDANIA	84699 67670
31	31	KHAMBHALIA	Juvangadh	BARIA ASMITA	0.001.000.00
32	32	KHAMBHALIA	KHAJURIYA	BARIA ASMITA	96016 05042
33	33	KHAMBHALIA	Sutariya		99981 48446
34	34	KHAMBHALIA	KOTADIYA	BERA MANEE	99981 48440
35	35	KHAMBHALIA	Madhupur		00084 45152
36	36	KHAMBHALIA	PIPALIYA	R.M.CHHUCHHAR	99984 45152
37	37	KHAMBHALIA	Vinzalpar	N.P.CHETARIA	94266 25700
38	38	KHAMBHALIA	Virmadad	HEMAT CHHUCHHAR	97253 76738
39	39	KHAMBHALIA	Movan	CHAVDA MAYUR	99748 36909
40	40	KHAMBHALIA	Sidhpur	A.D.GOJIA	97143 35365
41	41	KHAMBHALIA	Bhatel		89809 85037
42	42	KHAMBHALIA	GOKALPAR	JADEJA PURNABA	89809 85057
43	43	KHAMBHALIA	Aher sinhan	MAKWANA PARUL	97272 02948
44	44	KHAMBHALIA	vadalia sinhan		8320279423
45	45	KHAMBHALIA	SUMRA TARGHADI	PARMAR SWATI	
46	46	KHAMBHALIA	kakabhai sinhan	NANDANIA HASMITA	85115 70795
47	47	KHAMBHALIA	Danta		99986 17397
48	48	KHAMBHALIA	KANCHANPUR	J.S.JOSHI	
49	49	KHAMBHALIA	Beraja		07242 24100
50	50	KHAMBHALIA	NANA ASOTA	KARETHA KHIMA	97242 34100
51	51	KHAMBHALIA	Navi fot		0(201 4((0)
52	52	KHAMBHALIA	JUNI FOT	BANDHIA RAJESH	96381 46682
53	53	KHAMBHALIA	Chudeshvar		94600 99040
54	54	KHAMBHALIA	KALAVAD SIMANI	ANBALIA SUMAT	84690 88040
55	55	KHAMBHALIA	U.bara		07222 (0000
56	56	KHAMBHALIA	Aa.bara	NANDANIA SANJAY	97223 69909
57	57	KHAMBHALIA	Da.bara		07222 (0010
58	58	KHAMBHALIA	va.bara	NANDANIA SANJAY	97223 69910
59	59	KHAMBHALIA	Samor	K.N.ANBALIA	94279 42652

Sr.No.		Taluka	Village	TalatiName	MobileNumber
60	60	KHAMBHALIA	Hansthal		07270 10404
61	61	KHAMBHALIA	GOINJ	KANZARIYA CHETNA	97370 19494
62	62	KHAMBHALIA	sodasala	VINZODA PRABHAT	9714708688
63	63	KHAMBHALIA	kotha visotri		0714700600
64	64	KHAMBHALIA	KUVADIYA	VINZODA PRABHAT	9714708688
65	65	KHAMBHALIA	Haripar		
66	66	KHAMBHALIA	KABAR VISOTRI	PATHAK SANJAY	94276 50285
67	67	KHAMBHALIA	PARODIYA		
68	68	KHAMBHALIA	Mota Mandha	JADEJA NAINABA	78745 69181
69	69	KHAMBHALIA	NANA MANDHA	N.P.CHETARIA	94266 25700
70	70	KHAMBHALIA	beh	RAMDA KARI	96015 89097
71	71	KHAMBHALIA	Datrana		00040 (7014
72	72	KHAMBHALIA	ZAKASIYA	L.P.DER	98248 67014
73	73	KHAMBHALIA	Hanjadapar		01200 02072
74	74	KHAMBHALIA	DHANDHUSAR	RAM DHANI	81280 83963
75	75	KHAMBHALIA	Vadtra	JADEJA VIJAYSINH	98244 53134
76	76	KHAMBHALIA	Kajurada		9924233741
77	77	KHAMBHALIA	TIMBADI	- BHATI PUJA	
78	78	KHAMBHALIA	Kathidevlia		99042 75956
79	79	KHAMBHALIA	SODHA TARGHADI	SONDARVA TORAL	
80	80	KHAMBHALIA	Nana Ambala	JADEJA	
81	81	KHAMBHALIA	MOTA AMBALA	KRUSHNASINH	99783 19167
82	82	KHAMBHALIA	Bharana	A.B.GOSAI	98799 75666
83	83	KHAMBHALIA	Vadinar	M.K.ANBALIA	98795 68161
84	84	KHAMBHALIA	Sakhapar		
85	85	KHAMBHALIA	NAGDA	JERAMBHAI PARMAR	9924055640
86	86	KHAMBHALIA	MAHADEVIYA		
87	1	KALYANPUR	BHATIYA-A	R.H.Khara	99748 44580
88	2	KALYANPUR	BHATIYA-B	H.L.Jitiya	97732 76844
89	3	KALYANPUR	KALYANPUR-A	H.R.Ravaliya	96384 87453
90	4	KALYANPUR	KALYANPUR-B	M.P.Ravaliya	78781 17576

Sr.No.		Taluka	Village	TalatiName	MobileNumber
91	5	KALYANPUR	KENEDI	R.B.Khara	97378 70035
92	6	KALYANPUR	MEVASA		
93	7	KALYANPUR	VIRAPUR	- S.G.Patel	95377 82468
94	8	KALYANPUR	RAN	P.D.Jadav	92657 31361
95	9	KALYANPUR	JUVANPUR	U.A.Pindariya	99241 60075
96	10	KALYANPUR	BHOPALKA	D.R.Varu	70690 34618
97	11	KALYANPUR	LAMBA	Kuldingsih Chauda	0725245767
98	12	KALYANPUR	GANDHAVI	<ul> <li>Kuldipasih Chavda</li> </ul>	9725315767
99	13	KALYANPUR	KHAKHRADA-A	D.M.Colina	00748 20570
100	14	KALYANPUR	KHAKHRADA-B	– R.M.Gojiya	99748 29570
101	15	KALYANPUR	NANDANA-A		02202 20102
102	16	KALYANPUR	NANDANA-B	– P.K.Dodiya	82382 38102
103	17	KALYANPUR	DEVALIYA-A	S.H.Chohan	8866223641
104	18	KALYANPUR	DEVALIYA-B	S.H.Chohan	8800223041
105	19	KALYANPUR	GADHAKA	Pravin Hodiya	70162 00456
106	20	KALYANPUR	PATELKA	Ramesh Rathod	85118 95225
107	21	KALYANPUR	BANKODI	D.K.Nandaniya	99256 34999
108	22	KALYANPUR	HARIPAR-A	H.M.Vadhela	95746 26894
109	23	KALYANPUR	HARIPAR-B	n.m.vauneia	95746 26894
110	24	KALYANPUR	KHIRASARA	G.P.Jadeja (in charj)	82388 44944
111	25	KALYANPUR	DHATURIYA	G.P.Jadeja	82388 44944
112	26	KALYANPUR	CHUR	V.S.Rathod	97120 46765
113	27	KALYANPUR	RAJAPRA	D.M.Gagiya	96010 48948
114	28	KALYANPUR	GORANA	N.M.Varotariya	95105 63311
115	29	KALYANPUR	CHANDRAVADA	N.G.Sonagara	99985 23167
116	30	KALYANPUR	SATAPAR	G.R.Makvana	97250 79690
117	31	KALYANPUR	MALETA		97240 66945
118	32	KALYANPUR	BAMNASA	K.R.Bela	81413 33312
119	33	KALYANPUR	HADMATIYA	7 1/ 7010	94014 50425
120	34	KALYANPUR	JODHAPUR	– Z.K.Zala	84014 50425
121	35	KALYANPUR	NAVADRA	K.M.Bamaniya	76230 59747

Sr.No.		Taluka	Village	TalatiName	MobileNumber
122	36	KALYANPUR	BHOGAT	R.I.Jani	81415 48708
123	37	KALYANPUR	GOJINESH		92659 56511
124	38	KALYANPUR	GAGA	H.D.Gojiya	78745 35547
125	39	KALYANPUR	GURGADH	K.N.Gojiya	90165 90166
126	40	KALYANPUR	MOTA ASOTA	S.H.Dangar	97147 30505
127	41	KALYANPUR	MEGHAPAR TITODI	Sumat Ambaliya	92655 07664
128	42	KALYANPUR	MANIPUR HABARDI	P.L.Maru	63540 98585
129	43	KALYANPUR	SIDASRA		
130	44	KALYANPUR	MANPARA	C.J.Chohan	98795 30549
131	45	KALYANPUR	UDEPUR		
132	46	KALYANPUR	TANKARIYA-A	J.K.karamur	74051 18688
133	47	KALYANPUR	TANKARIYA-B	S.H.Vaghela	78742 27503
134	48	KALYANPUR	SANOSARI	J.K.karamur	74051 18688
135	49	KALYANPUR	PREMSAR	S.H.Vaghela	78742 27503
136	50	KALYANPUR	DUDHIYA	M.M.Ambaliya	
137	51	KALYANPUR	ASHIYAVADAR		84699 49025
138	52	KALYANPUR	JEPUR		
139	53	KALYANPUR	SURYAVADAR	D.R.Bela	97379 169713
140	54	KALYANPUR	KHIJADAD		90166 61213
141	55	KALYANPUR	MANGARIYA	J.N.Kanteliya	
142	56	KALYANPUR	JAMPAR		
143	57	KALYANPUR	DHUMTHAR	K.B.Jam	94277 73636
144	58	KALYANPUR	CHAPAR		0.02.42.02002
145	59	KALYANPUR	KANPAR SHERDI	K.G.Baraiya	96242 93002
146	60	KALYANPUR	DANGARVAD		05064 404 45
147	61	KALYANPUR	RANPARADA	S.G.Jadeja	95861 10145
148	62	KALYANPUR	NAGADIYA	S.G.Jadeja (in charj)	95861 10145
149	63	KALYANPUR	BHATVADIYA		
150	64	KALYANPUR	GOKALPAR	A.S.Gojiya	95302 50007
151	65	KALYANPUR	PANELI	J.S.Gojiya	95126 61718

Sr.No.		Taluka	Village	TalatiName	MobileNumber
152	66	KALYANPUR	CHACHLANA	D K Shakkar	76007 24704
153	67	KALYANPUR	GANGADI	R.K.Shakhra	76987 34784
154	68	KALYANPUR	PINDARA	A.S.Desai	82382 38102
155	69	KALYANPUR	RANAJITPUR	D.V. Ob surds	00005 22074
156	70	KALYANPUR	MAHADEVIYA	D.V.Chavda	80005 23871
157	71	KALYANPUR	KANAKPAR		05502.05452
158	72	KALYANPUR	MADI	B.V.Chohan	95583 95152
159	1	DWARKA	GORIYARLI	JIGNASHABEN L. VASANI	9824417408
160	2	DWARKA	BHIMRALA	JIGISHABEN PARAMAR	9898634223
161	3	DWARKA	KORALA	DAKSHABEN L. SOLANKI	9909675835
162	4	DWARKA	VACHCHHU	BHAVINBHAI M. CHUDASAMA	9904673002
163	5	DWARKA	SHAMALASAR	DINESHSHINH M. CHUDASAMA	8488037520
164	6	DWARKA	HAMUSAR	KAUSHALBHAI H. PANCHAOLA	9978158571
165	7	DWARKA	BARADIYA	CHIRAG G. PARAMAR	8488913262
166	8	DWARKA	GORINJA	BHARATBHAI R. JOSHI	9898464408
167	9	DWARKA	VASAI	DILIP VI. JOSHI	8347621415
168	10	DWARKA	MITHAPUR	J. J. MIN	8264012535
169	11	DWARKA	VARAVALA-A		007/505770
170	12	DWARKA	VARAVALA-B(I/C)	G. B. BELA	9974565770
171	13	DWARKA	POSHITRA-A(I/C)		0070750007
172	14	DWARKA	POSHITRA-B	KIRANBEN H. ROSHIYA	9879758837
173	15	DWARKA	MOJAP		9759000000
174	16	DWARKA	BATISHA	NITABEN VAGHORA	8758006206
175	17	DWARKA	TOBAR		0040051001
176	18	DWARKA	MEVASA	K. R. NISARATA	8849951881
177	19	DWARKA	SHIVARAJPUR	GAUTAMBHAI	0000676070
178	20	DWARKA	MAKANPUR	PARAMAR	9898676872
179	21	DWARKA	OKHAMADHI		0000400500
180	22	DWARKA	KURANGA(I/C)	- ARATIBEN BARAI	9898486520

Sr.No.		Taluka	Village	TalatiName	MobileNumber
181	23	DWARKA	NAGESHWAR		0000004400
182	24	DWARKA	RANGASAR	NEHALBEN K. LADHA	8866324106
183	25	DWARKA	KALYANPUR(I/C)		
184	26	DWARKA	DHRASANVEL	- MILANBAHI VEGAD	9265253561
185	27	DWARKA	КНАТИМВА	RAJASHIBHAI V.	
186	28	DWARKA	MOTABHAVADA(I/C	KARANGIYA	9925237620
187	29	DWARKA	TUPANI	JAYDEVBHAI R.	
188	30	DWARKA	ANIYARI(I/C)	CHAUHAN	8200070314
189	31	DWARKA	NANABHAVADA		0.001.050.005
190	32	DWARKA	MULAVASA(I/C)	- JYOTIBEN K. ZALA	8401450425
191	33	DWARKA	GADHECHI	HARISHBHAI M.	0004005700
192	34	DWARKA	PADALI(I/C)	DANGAR	9624235796
193	35	DWARKA	MULAVEL(I/C)	MANJULABEN M. CHOPADA	9924694032
194	36	DWARKA	RAJAPARA		
195	37	DWARKA	NAVIDHREVAD		
196	38	DWARKA	MERIPUR	VIJAY R. PANKHANIYA	9978158571
197	39	DWARKA	JUNIDHREVAD(I/C)		
198	40	DWARKA	DHINAKI		9408570127
199	41	DWARKA	CHARAKALA(I/C)	BHARATSHINH M. JADEJA	
200	42	DWARKA	LOVARALI(I/C)		
201	1	BHANVAD	AMBARADI	BHAVNABA PRAVINSINH VALA (I/C)	9998936160
202	2	BHANVAD	MEVASA	JAYESHKUMAR BHIMJIBHAI KADAVALA (I/C)	9586785420
203	3	BHANVAD	DHARAGAR	BHAVNABA PRAVINSINH VALA	9998936160
204	4	BHANVAD	MANPAR	BHAVNABA PRAVINSINH VALA	9998936160
205	5	BHANVAD	KATKOLA	RAVINDRA CHANDULAL NAKUM (I/C)	9408502702
206	6	BHANVAD	BODKI	AVANIBEN RAJESHBHAI ANJARIYA	9601641572
207	7	BHANVAD	BHORIYA	AVANIBEN RAJESHBHAI ANJARIYA	9601641572
208	8	BHANVAD	FOTDI	AVANIBEN RAJESHBHAI ANJARIYA	9601641572
209	9	BHANVAD	VANAVAD	VIJAYBHAI SUKHLAL MAKAVANA	7359426177

Sr.No.		Taluka	Village	TalatiName	MobileNumber
210	10	BHANVAD		HARDIK BHIKHABHAI	
210	10	BHAINVAD	NAVAGAM	RAVALIYA	7878580004
211	11	BHANVAD	KRUSHNAGADH	VINODRAY KHIMJIBHAI AGHERA	9979022127
212	12	BHANVAD	SEVAK DEVALIYA	BHAVESHKUMAR NAVINCHANDRA CHUHAN	8000074219
213	13	BHANVAD	ROJIVADA	BHAVESHKUMAR NAVINCHANDRA CHUHAN	8000074219
214	14	BHANVAD	SAI DEVALIYA	GAYTRIBEN MAHESHBHAI RAVAL	9909951706
215	15	BHANVAD	MOTA KALAVAD	KAJALBEN ARAJANBHAI MODHVADIYA	9601672183
216	16	BHANVAD	GHUMALI	JAMNABEN JETHABHAI NANDANIYA	9558800528
217	17	BHANVAD	TIMBADI	JAMNABEN JETHABHAI NANDANIYA	9558800528
218	18	BHANVAD	MODPAR	DEVEN VIRABHAI BELA (I/C)	9913635007
219	19	BHANVAD	BHAVANESHVAR	SANTOKBEN VAJASHIBHAI BERA	8511841370
220	20	BHANVAD	SANAKHALA	JAYDIPBHAI SAVAJIBHAI PANKHANIYA	9998471757
221	21	BHANVAD	SHIVA	RAVINDRA CHANDULAL NAKUM	9408502702
222	22	BHANVAD	CHOKHANDA	DEVEN VIRABHAI BELA	9913635007
223	23	BHANVAD	JAMPAR	RENISHKUMAR CHIMANLAL BAKORI	8128343734
224	24	BHANVAD	CHANDVAD	RENISHKUMAR CHIMANLAL BAKORI	8128343734
225	25	BHANVAD	RETA KALAVAD	JAYDIPBHAI SAVAJIBHAI PANKHANIYA (I/C)	9998471757
226	26	BHANVAD	KANTOLIYA	JAYDIPBHAI SAVAJIBHAI PANKHANIYA (I/C)	9998471757
227	27	BHANVAD	ZARERA	BHARTIBEN DEVASHIBHAI CHAVDA	7567280111
228	28	BHANVAD	VERAD	HIMATBHAI DEVASHIBHAI SARAVAIYA	9428914943
229	29	BHANVAD	MORZAR	YOGESH KARASHANBHAI PUROHIT (I/C)	9727183787
230	30	BHANVAD	FATEPUR	GAYTRIBEN MAHESHBHAI RAVAL (I/C)	9909951706
231	31	BHANVAD	RANPARADA	DAKSHABEN VALABHAI SOLANKI	9601090404
232	32	BHANVAD	AMBALIYARA	DAKSHABEN VALABHAI SOLANKI	9601090404

Sr.No.		Taluka	Village	TalatiName	MobileNumber
233	33	BHANVAD	KALYANPUR	JAYESHKUMAR BHIMJIBHAI KADAVALA (I/C)	9586785420
234	34	BHANVAD	JAMBUSAR	RAYPAL DEVASHIBHAI RATHOD (I/C)	9724363465
235	35	BHANVAD	JASHAPAR	RAYPAL DEVASHIBHAI RATHOD (I/C)	9724363465
236	36	BHANVAD	BHENAKVAD	RAKESHKUMAR LAKSHMIDAS PATEL	8320663654
237	37	BHANVAD	DHEBAR	RAKESHKUMAR LAKSHMIDAS PATEL	8320663654
238	38	BHANVAD	GADU	PRATIK ANANTRAY JOSHI (I/C)	9979861414
239	39	BHANVAD	BHARATPUR	PRATIK ANANTRAY JOSHI	9979861414
240	40	BHANVAD	VIJAYPUR	PRATIK ANANTRAY JOSHI	9979861414
241	41	BHANVAD	MOKHANA	PRATIK ANANTRAY JOSHI	9979861414
242	42	BHANVAD	GUNDA	RAYPAL DEVASHIBHAI RATHOD	9724363465
243	43	BHANVAD	SAJADIYARI	JAGRUTIBEN JAYANTILAL GADHIYA	8140654080
244	44	BHANVAD	GUNDALA	JAGRUTIBEN JAYANTILAL GADHIYA	8140654080
245	45	BHANVAD	RANPAR	DEVEN VIRABHAI BELA (I/C)	9913635007
246	46	BHANVAD	HATHALA	PRATIK ANANTRAY JOSHI (I/C)	9979861414
247	47	BHANVAD	DUDHALA	BHAVESHKUMAR NAVINCHANDRA CHUHAN (I/C)	8000074219
248	48	BHANVAD	ROZADA	BHARTIBEN DEVASHIBHAI CHAVDA (I/C)	7567280111
249	49	BHANVAD	KABARAKA	YOGESH KARASHANBHAI PUROHIT (I/C)	9727183787
250	50	BHANVAD	JOGARA	YOGESH KARASHANBHAI PUROHIT (I/C)	9727183787
251	51	BHANVAD	SHEDHAKHAI	VIJAYBHAI SUKHLAL MAKAVANA (I/C)	7359426177
252	52	BHANVAD	PACHHATAR	JAYESHKUMAR BHIMJIBHAI KADAVALA	9586785420
253	53	BHANVAD	PACHHATARADI	JAYESHKUMAR BHIMJIBHAI KADAVALA	9586785420
254	54	BHANVAD	RUPAMORA	VILASBEN VASHARAMBHAI KARENA	9924055826

# Annexure: 24 Sarpanch Contact Number

Sr.				Mobile
No.	Taluka	Gram Panchayat	Sarapanch Name	Number
1	Khambhaliya	Ambardi Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Maniben Bhimsibhai Vasara	98257 94002
2	Khambhaliya	Ambardi Devariya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt.Kaviben Karnabhai Gojiya	82382 16110
3	Khambhaliya	Athamna Bara Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Surajba umedsang Jadeja	9913397954
4	Khambhaliya	Bajana Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Bhasnuben Devdhibhai Kanara	9978305400
5	Khambhaliya	Beh Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Monghiben Varjangbhai Gadhavi	99042 95242
6	Khambhaliya	Beraja Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Santokben Kanabhai Chavda	96245 34234
7	Khambhaliya	Bhandariya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Ranmal Jiva Gamara (IC)	99782 05344
8	Khambhaliya	Bhankhokhari Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Punjiben Mandanbhai Goradiya	70966 08352
9	Khambhaliya	Bhara Beraja Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Jivaben Mandanbhai Rudach	98248 74755
10	Khambhaliya	Bhatel Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Hodiya Kanchanben Dilipkumar	98298 55776
11	Khambhaliya	Bhadathar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Nathiben Arjanbhai Keshariya	81280 50607
12	Khambhaliya	Bharana Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Ramba Devisang Jadeja	97259 13195
13	Khambhaliya	Bhattgam Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Kamalben Meshurbhai Karia	99245 12521
14	Khambhaliya	Bhinda Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Viliben Vejanandbhai Bandhiya	99139 06764

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
15	Khambhaliya	Chudeshwar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Kundanba Chandrasinh Jadeja	99244 98092
16	Khambhaliya	Danta Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Desaben Somabhai Sinch	98243 10133
17	Khambhaliya	Datrana Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Roopiben hebhabhai Chavda	99240 56338
18	Khambhaliya	Dakhanada Bara Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Taraba Bachubha Jadeja	7698231111
19	Khambhaliya	Dhandhusar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Manuba Ashaji Jadeja	72028 84402
20	Khambhaliya	Dharampur Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Janaben Jentibhai Kachhtiya	9723430317
21	Khambhaliya	Goinj Gram Panchayat,Tal.Khambhaliya,Dist.De vbhoomi-Dwarka	Smt. Janakben Kasambhai Turk	89807 63561
22	Khambhaliya	Golan Sherdi Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Kariben Ladhubhai Sarthiya	99275 42011
23	Khambhaliya	Gokalpar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Manjulaben Khimabhai Nakum	99244 72272
24	Khambhaliya	Hanjadapar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Maniben Devatbhai Ambaliya	95589 36339
25	Khambhaliya	Hansthal Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Zanziben Goganbhai Dethariya	94262 64924
26	Khambhaliya	Harshadpur Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Pritiben Sanjaybhai Nakum	98242 34781
27	Khambhaliya	Juni Fot Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Vikrambhai Vajashibhai Khola	70435 90900
28	Khambhaliya	Juvangadh Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Bhikhabhai Vajasibhai Suva	97378 90621
29	Khambhaliya	Juna Tathiya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Dadubhai Hajabhai Karmur	90994 74871

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
30	Khambhaliya	Kabar Visotra Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Hemlataba Gulabsinh Jadeja	75746 55830
31	Khambhaliya	Kajurda Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Rajuben Ramabhai Vaghela	99253 03180
32	Khambhaliya	Kalavad Simani Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Rasikba Hakubha Jadeja	98259 62148
33	Khambhaliya	Kanchanpur Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Nasimben Basirbhai Khafi	99790 86218
34	Khambhaliya	Kandorna Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Tabiben Naranbhai Nandaniya	97175 53123
35	Khambhaliya	Kathi Devariya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Gajaraba Bhikhubha Vadher	97269 11111
36	Khambhaliya	Keshod Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Ranjanben Kashyapbhai Ahir	96383 93436
37	Khambhaliya	Khajuriya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Maniben Govindbhai Nandaniya	99785 62885
38	Khambhaliya	Kolva Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Derajbhai Nathubhai Makwana	96981 40816
39	Khambhaliya	Kota Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Sharifaben Doshmamad Khira	96176 37003
40	Khambhaliya	Kotdiya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Pamiben Karnabhai Gagiya	97267 78751
41	Khambhaliya	Kotha Visotri Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Mandanbhai Bhimshibhai Gojiya	99794 65067
42	Khambhaliya	Kuvadiya Gram Panchayat,Tal.Khambhaliya,Dist.De vbhoomi-Dwarka	Mr. Devatbhai Jagabhai Dethariya	98257 09932
43	Khambhaliya	Hapa Lakhasar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Manjuben Ranmalbhai Chhaiya	97273 20524
44	Khambhaliya	Laliya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Davabhai Keshurbhai Sumaniya	99249 73792

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
45	Khambhaliya	Lalparda Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Virabhai Ranmalbhai Karmur	81540 88878
46	Khambhaliya	Laluka Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Rajiben Karabhai Pindariya	96019 69400
47	Khambhaliya	Madhupur Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Hemantbhai Bhikhubhai Ram	89800 70100
48	Khambhaliya	Mahadeviya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Pamiben Bhikhabhai Nandaniya	94089 48446
49	Khambhaliya	Manza Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Rajpalbhai Bhikhabhai Karia	97235 20563
50	Khambhaliya	Mota Ambala Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Jiluben Nazimbhai Sandhar	83475 38800
51	Khambhaliya	Mota Mandha Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Naresh Khimabhai Makwana	99792 42012
52	Khambhaliya	Moti Khokhari Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Dayben Meramanbhai Der	97266 17747
53	Khambhaliya	Movan Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Nathabhai Premjibhai Hadiyal	97378 93636
54	Khambhaliya	Nagda Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Halimaben Rajakbhai Gajan	98987 07221
55	Khambhaliya	Nana Ambala Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Bibiben Alibhai Gajjan	99254 04601
56	Khambhaliya	Nana Asota Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Bhartiben Madhavdas Ramavat	98243 64785
57	Khambhaliya	Nana Mandha Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Aminbhai Harunbhai Sandhar	84695 28403
58	Khambhaliya	Navi Fot Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Jethabhai savdasbhai Pindariya	99250 54715
59	Khambhaliya	Nava Tathiya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Bhayabhai Bhikhabhai Pindariya	81538 57141

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
60	Khambhaliya	Parodiya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Maluben Bhikhabhai Bhachkan	99246 88621
61	Khambhaliya	Pir Lakhasar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Aminaben Isha Gajjan	97231 62203
62	Khambhaliya	Pipalia Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Maldebhai Jivabhai Aswar	99787 75765
63	Khambhaliya	Ramnagar Gram Panchayat,Tal.Khambhaliya,Dist.De vbhoomi-Dwarka	Mr. karshanbhai Velabhai Parmar	92281 30172
64	Khambhaliya	Sakhapar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Tejabhai Lakhamanbhai Khara	99042 94591
65	Khambhaliya	Samor Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Lakhamanbhai Sajanbhai Chavda	97374 37747
66	Khambhaliya	Saktinagar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Prakashbhai Karshanbhai Kanjariya	99983 74333
67	Khambhaliya	Shedha Bhadthar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Nebhabhai Hardasbhai Ambalia	99784 17802
68	Khambhaliya	Siddhapur Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Lakhamanbhai Fogabhai Parmar	94277 72023
69	Khambhaliya	Ahir Sinhan Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Rambhiben Kanabhai Chavda	97122 15234
70	Khambhaliya	Kakabhai Sinhan Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Punjabhai Lakhamanbhai Goraniya	97276 97101
71	Khambhaliya	Sodasla Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Rajendrasinh Narubha Vadher	95749 78579
72	Khambhaliya	Sodha Targhadi Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Ghanshyamsinh Sujubha Jadeja	97267 99999
73	Khambhaliya	Sonardi Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Majbutsinh Mobatsinh Jadeja	99798 50928

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
74	Khambhaliya	Sumara Targhari Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Ismailbhai Osmanbhai Khira	92281 28135
75	Khambhaliya	Sutriya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Markhibhai Parbatbhai Gojiya	97122 47952
76	Khambhaliya	Thakar Sherdi Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Jaysukhbhai Bhimabhai Kanjariya	99130 29123
77	Khambhaliya	Timbadi Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Varshba Rameshbhai Jadeja	97243 07777
78	Khambhaliya	Ugamna Bara Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Vikramsinh Jivubha Jadeja	96627 22146
79	Khambhaliya	Vadalia Sinhan Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Jayrajsinh ajitsinh Jadeja	99785 92863
80	Khambhaliya	Vadinar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Karimbhai Abdulbhai Sandhar	96787 61500
81	Khambhaliya	Vadtra Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Parbatbhai Rambhai Chavda	90166 66266
82	Khambhaliya	Vachala Bara Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	HEMANTSINH BHIKHUBHA JADEJA	91068 68915
83	Khambhaliya	Vinjalpar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Pithabhai Jinabhai Der	98795 09735
84	Khambhaliya	Viramdad Gram Panchayat,Tal.Khambhaliya,Dist.De vbhoomi-Dwarka	Mr. Khimabhai Nebhabhai Ambalia	94299 47000
85	Khambhaliya	Jakasiya Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Mr. Khimabhai Bhikhabhai Joshi	98246 26880
86	Khambhaliya	Haripar Gram Panchayat, Tal.Khambhaliya, Dist.Devbhoomi-Dwarka	Smt. Tarubaben Bharatbhai Kanjariya	80004 60015
87	Bhanvad	Ambaliyara Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Vajiben Maganbhai Limbad	79844 69629
88	Bhanvad	Ambardi Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Purnaba Vikramsinh Vala	99074 76502

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
89	Bhanvad	Bharatpur Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Vijay Parbatbhai Sadiya	84691 02420
90	Bhanvad	Bhavaneshwar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Nathiben Arvindbhai Karena	99984 56593
91	Bhanvad	Bhenakvad Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Fatmaben Sumarbhai Vidhani	98248 55332
92	Bhanvad	Bhoriya-Fotadi Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Ansuyaben Hasmukhbhai Chauhan	86694 24392
93	Bhanvad	Bodaki Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Maliben Jerambhai Pathar	97251 42961
94	Bhanvad	Chandvad Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Jethiben Nagabhai Karmur	99091 64703
95	Bhanvad	Chokhanda Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Nathiben Babubhai Gojiya	98790 57356
96	Bhanvad	Dharagar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Bibiben Ibrahimbhai Shetha	99044 81664
97	Bhanvad	Dhebar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Taslimbibi ahemad saiyad	96628 78692
98	Bhanvad	Dudhala Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Zanziben Virabhai Solanki	94272 38393
99	Bhanvad	Fatepur Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Kadviben Mukeshbhai Karngiya	98988 14275
100	Bhanvad	Gadu Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Sonalben Ramshibhai Bhetariya	99259 90146
101	Bhanvad	Ghumali Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Jayshreeben Vijaybhai Gujarati	94272 76853
102	Bhanvad	Gunda Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Manjulaben Rajeshbhai Dhanak	97232 47845
103	Bhanvad	Gundala Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Ramshibhai Nathabhai Dangar	99094 41007

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
104	Bhanvad	Hathala Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Vinodpari Dineshpuri puri	97246 02018
105	Bhanvad	Jambusar Gram Panchayat,Tal. Bhanvad,Dist.Devbhoomi-Dwarka	Smt. liliben Hajabhai odedar	99781 40900
106	Bhanvad	Jampar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Maniben Govindbhai Bhatia	99094 76515
107	Bhanvad	Jasapar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Anjuben Mayurbhai Gaglia	72290 22629
108	Bhanvad	Zarera Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Kesarben Vasharambha Shir	99980 77376
109	Bhanvad	Zogra Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Daviben Naranbhai Barai	99044 99024
110	Bhanvad	Kabraka Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Hiriben Vajshibhai Karangiya	94289 89815
111	Bhanvad	Kalyanpur Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Kishorbhai Lakshamanbhai Karmur	98246 55241
112	Bhanvad	Katkola Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Yogeshbhai Danabhai Karmur	81287 14785
113	Bhanvad	Krushngadh Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Bhikhabhai Meramanbhai Karngiya	98241 44521
114	Bhanvad	Manpar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Dadubhai Vikramsibhai Bera	99790 22231
115	Bhanvad	Mevasa Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Rajiben Jagabhai Bhimbha	99255 31835
116	Bhanvad	Modapar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Savdasbhai Hardasbhai Gojiya	99254 75647
117	Bhanvad	Mokhana Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Rajiben Virabhai Mori	99790 33233
118	Bhanvad	Morzar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Rakeshbhai Pradipbhai Bagda	9099166220

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
119	Bhanvad	Mota Kalavd Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Krishnaben Mukeshbhai Vavnotiya	97251 42977
120	Bhanvad	Navagam Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Dharmesh Naranbhai Karavadiya	97238 02742
121	Bhanvad	Pachhtar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Amrabhai Karabhai Mori	99790 22349
122	Bhanvad	Pachhtardi Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Motiben Murubhai Kodiyatar	99790 85166
123	Bhanvad	Ranpar Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Nathabhai Raiyabhai Kodiyatar	98253 90220
124	Bhanvad	Ranparda Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Hajiben Husenbhai Hingora	97375 32059
125	Bhanvad	Reta Kalavad Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Joshnaben Mohanbhai Gorfal	99790 85050
126	Bhanvad	Rojada Gram Panchayat,Tal. Bhanvad,Dist.Devbhoomi-Dwarka	Mr. Bhimabhai Arshibhai khunti	98793 94730
127	Bhanvad	Jam Rojivada Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Govindbhai Khimabhai Nanera	99781 40881
128	Bhanvad	Roopamora Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Maldebhai Devabhai Piprotar	94279 42753
129	Bhanvad	Sai Devaliya Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Vasantbhai Nathabhai Santoki	81281 52732
130	Bhanvad	Sajadiyari Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Popatbhai Rajsibhai Odedara	81540 58369
131	Bhanvad	Sankhala Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Alabhai Arshibhai Karmur	81415 07094
132	Bhanvad	Sevak Devaliya Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Aisaben Allarakha Ghugha	99787 91902
133	Bhanvad	Sedhakhai Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Nareshbhai arjanbhai Barai	99047 77737

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
134	Bhanvad	Shiva Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Goganbhai Lakhmanbhai Kanara	97267 74764
135	Bhanvad	Timbadi Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Bhimiben Murubhai Bata	97269 34096
136	Bhanvad	Vanavad Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Dashrathsinh Bahadursinh Jadeja	99745 36446
137	Bhanvad	Verad Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Mr. Bhimabhai Lakhubhai Dagra	99790 22648
138	Bhanvad	Vijaypur Gram Panchayat, Tal. Bhanvad, Dist.Devbhoomi-Dwarka	Smt. Hetalben Sureshbhai Gorfal	82383 95653
139	Kalyanpur	ashiyavadar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Hansaba Kanaji Jadeja	97268 30505
140	Kalyanpur	Kanakpar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. meghaben Nathubhai Jam	99042 40413
141	Kalyanpur	Kalyanpur Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Poojaben Vikrambhai Bela	98797 70645
142	Kalyanpur	Kanpar Sherdi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Maniben Keshurbhai Jogal	97376 22060
143	Kalyanpur	Kenedi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Manjuben Davubhai Nakum	97245 42971
144	Kalyanpur	Khakharda Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Daxaba Dilipsinh Jadeja	98253 40170
145	Kalyanpur	Khijdal Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Hareshsinh Khengarji Jadeja	96877 77931
146	Kalyanpur	Khirshara Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Hamirbhai Ramabhai Shir	97244 68071
147	Kalyanpur	Gadhka Gram Panchayat,Tal. Kalyanpur,Dist.Devbhoomi-Dwarka	Smt. Dayben Arvindbhai Parmar	97245 81581
148	Kalyanpur	Gaga Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Januben Meramanbhai Chavda	99256 48493

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
149	Kalyanpur	Gangadi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Madhiben Maldebhai Kambariya	98795 65115
150	Kalyanpur	Gandhavi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Sejalben Satishgar Ramdati	98792 17971
151	Kalyanpur	Gurgadh Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Salemanbhai Osamanbhai Thaiyam	97125 69277
152	Kalyanpur	Gokalpar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Mohanbhai Kanabhai Parmar	97265 26394
153	Kalyanpur	Gojinesh Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Jashuben Nathabhai Varu	94277 57249
154	Kalyanpur	Gorana Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Lilabhai Parbhatbhai Modhvadiya	98256 86823
155	Kalyanpur	Chapar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Kadviben Premjibhai Kanjariya	97378 23523
156	Kalyanpur	Chandravada Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Rekhaben Harbhambhai Odedara	97255 62222
157	Kalyanpur	Chachlana Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Nimuben Jigneshgar Ramdati	81404 13636
158	Kalyanpur	Chur Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Samatbhai Khimabhai Sagathiya	99785 61774
159	Kalyanpur	Jampar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Valiben Ranmalbhai Hadiyal	99797 56272
160	Kalyanpur	Juvanpur Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Hiruben Ukabhai Hadiyal	94277 56830
161	Kalyanpur	Jodhpur Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Santokben Rasikbhai Songara	95378 46744
162	Kalyanpur	Tankariya Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Amrabhai Ranabhai Parmar	81280 01681
163	Kalyanpur	Dangarvad Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Ramilaben Jesabhai Amar	99792 40613

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
164	Kalyanpur	Dudhiya Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Savitaben Parbatbhai Varu	96878 50500
165	Kalyanpur	Devaliya Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Bhavnaben Vijaybhai Madam	97248 00008
166	Kalyanpur	Dhaturiya Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Lakhiben Ukabhai Nandaniya	97096 38613
167	Kalyanpur	Dhumthal Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Dayben Bhayabhai Ravliya	94289 89623
168	Kalyanpur	Nagadiya Gram Panchayat,Tal. Kalyanpur,Dist.Devbhoomi-Dwarka	Smt. Rasikba Drupatsinh Jadeja	99258 50340
169	Kalyanpur	Nandana Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Jivabhai Jinabhai Parmar	99091 13839
170	Kalyanpur	Navdra Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Vinodkumar Devshibhai Chavda	97258 37333
171	Kalyanpur	Patelka Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Parbatbhai Mesurbhai Kandoriya	99132 39748
172	Kalyanpur	Paneli Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Keshurbhai Devshibhai Bela	99795 13578
173	Kalyanpur	Pindara Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Devatbhai Alabhai Lagariya	99137 09999
174	Kalyanpur	Bamnasa Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Jashuba Ajitsinh Vadher	97276 56570
175	Kalyanpur	Bakodi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Rajiben Samatbhai Gojiya	98241 50794
176	Kalyanpur	Bhatvadiya Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Jashuben Devshibhai Bhatia	82009 56623
177	Kalyanpur	Bhatia Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Satiben Bhikhabhai Chavda	97129 55206
178	Kalyanpur	Bhopalka Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Sitaba Prakashsinh Jadeja	97245 97262

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
179	Kalyanpur	Bhogat Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Muriben Narubhai Luna	99257 89864
180	Kalyanpur	Manipar Habardi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Virabhai Davubhai Bera	97230 12001
181	Kalyanpur	Mahadeviya Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Kanabhai Arshibhai Karngiya	99785 62234
182	Kalyanpur	Maleta Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Samatbhai Jethabhai Gojiya	98259 65605
183	Kalyanpur	Mangariya Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Vijaysinh amarsang Jadeja	99743 50195
184	Kalyanpur	Meghpar Titodi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Bhayabhai Samatbhai Chhuchhar	97260 84580
185	Kalyanpur	Madi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Alabhai Dulabhai Jam	96645 03787
186	Kalyanpur	Mevasa Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Bhanuben Hamirbhai Rathod	72288 64047
187	Kalyanpur	Mota Asota Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Nebhabhai Arjanbhai Chavda	97140 70529
188	Kalyanpur	Ranjitpur Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Simbhiben Ranmalbhai Suva	99098 48422
189	Kalyanpur	Rajpara Gram Panchayat,Tal. Kalyanpur,Dist.Devbhoomi-Dwarka	Mr. Davubhai Hardasbhai Chudasama	76002 79122
190	Kalyanpur	Ranparda Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Meramanbhai Lakhubhai Goraniya	98790 08293
191	Kalyanpur	Ran-Limbadi Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Bhikhabhai Parbatbhai Songara	99791 66640
192	Kalyanpur	Lamba Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Kanabhai Hamirbhai Gojiya	90674 30819
193	Kalyanpur	Virpur Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Jivabhai Ranabhai Lagariya	99792 55299

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
194	Kalyanpur	Sanosari-Premsar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Kanabhai Dosabhai Suva	94267 16480
195	Kalyanpur	Satapar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Merubhai Godalbhai Kandoriya	99980 87334
196	Kalyanpur	Sidsara Manpara Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Chandrasinh Hakubha Jadeja	99133 92567
197	Kalyanpur	Suryavadar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Mansukhbhai Karsanbhai Parmar	99252 57634
198	Kalyanpur	Hadmatiya Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Savdhiben Jethabhai Varu	95864 12200
199	Kalyanpur	Haripar Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Smt. Kantaben Kanjibhai Parmar	98255 51928
200	Kalyanpur	Udepur Gram Panchayat, Tal. Kalyanpur, Dist.Devbhoomi-Dwarka	Mr. Ladhabhai Devshibhai Songra	94293 33856
201	Dwarka	Juni Dhrevad Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Raydharbha Valaiyabha ker	636514 01788
202	Dwarka	Varvala Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Mansukhbhai Sajanbhai Mordav	96629 14455
203	Dwarka	Kalyanpur Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Munjabha Vidhabha Manek	99784 35169
204	Dwarka	Korada Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Dhaniben Dharnantbhai Chavda	94262 64934
205	Dwarka	Poshitra Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Jashiben Somabhai Nagesh	92281 79762
206	Dwarka	Tupani Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Khimabhai Karnabhai Chavda	97231 42370
207	Dwarka	Rajpara Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Daud Kara bhikhlani	82382 31631
208	Dwarka	Goriyari Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Manishaben Vanrajbhai Manek	63528 93167

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
209	Dwarka	Gadhechi Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Devubha Udhabha Sumaniya	97244 33767
210	Dwarka	Batisha Gram Panchayat,Tal. Dwarka,Dist.Devbhoomi-Dwarka	Smt. Hiralbai Bhojabha Jam	90674 28843
211	Dwarka	Mevasa Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Ladbai Pabubha Manek	99098 12702
212	Dwarka	Padali Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Sahdevsinh Gumansinh Vadher	95746 13545
213	Dwarka	Vachchhu Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Jalubha Parbatbha Manek	95586 62494
214	Dwarka	Meripur Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Patramalbha Ranmalbha Manek	99249 91145
215	Dwarka	Tobar Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Malaibai Khetabha Manek	85114 08942
216	Dwarka	Kuranga Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Sitaben ghelubha Manek	97121 50450
217	Dwarka	Bhimrana Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Nathiben Madhabhai Siruka	98987 57816
218	Dwarka	Navi Dhrevad Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Sunibai Lakhabha Manek	94264 66757
219	Dwarka	Dhinki Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Ranmalbhai Sidabhai Makwana	96871 16987
220	Dwarka	Charakla Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Bhanuben Bharabhai Savani	99094 90974
221	Dwarka	Rangashar Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Palabha Gagabha Sumaniya	96244 62828
222	Dwarka	Mojap Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Vadhabha Kayabha Kumbhani	99741 47037
223	Dwarka	Dhrasanvel Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Jethiben Gagabha Vadha	90995 16542

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
224	Dwarka	Makanpur Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Jassiben Jethabhai Bathiya	74908 27348
225	Dwarka	Gorinja Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Suriben Savjabha Bathiya	92760 95995
226	Dwarka	Vasai Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Lilaben Jivanbhai Manek	6352093535
227	Dwarka	Shivrajapur Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Ashokbha Bhimbha Nayani	99043 03536
228	Dwarka	Okhamadhi Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Nathiben Lagdhirbhai Mun	95120 81084
229	Dwarka	Lovrali Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Valiben Hadabha Bhagad	97275 74428
230	Dwarka	Baradiya Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Lakhuben Ravibhai Nangesh	90333 33338
231	Dwarka	Nageshwar Gram Panchayat,Tal. Dwarka,Dist.Devbhoomi-Dwarka	Amarsangbha Murubha Sumaniya	97375 17420
232	Dwarka	Nanabhavda Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Valbai Rajabha Sumaniya	99045 50081
233	Dwarka	Hamusar Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Daxaben myajarbha Hathal	99748 54824
234	Dwarka	Khatumba Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Rukhanbai Dhanabhai Sumaniya	97146 56077
235	Dwarka	Aniyari Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Smt. Nathibai Bhagatsinh Sumaniya	81405 90980
236	Dwarka	Motabhavda Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Sumaniya Umabai Mandanbha	96624 25458
237	Dwarka	Shamlasar Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Vanrajbha Thariyabha Manek	94272 25971
238	Dwarka	Mulvel Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Mr. Jesabha Hajabha Jagatiya	97258 05266

Sr. No.	Taluka	Gram Panchayat	Sarapanch Name	Mobile Number
239	Dwarka	Mulvasar Gram Panchayat, Tal. Dwarka, Dist.Devbhoomi-Dwarka	Khimiben Kanabhai Chasiya	95370 79895

## Annexure: 24 GPS Coordinates of Village

	2012				
631	ગ્રામ પંચાયતનં		નાલકો	วงอย่อง	રેખાંશ
ક્રમ	પંચાયતનું	ગામ	તાલુકો	અક્ષાંશ	રબારા
	નામ				
1	કોઠા વિસોત્રી	કોઠા વિસોત્રી	ખંભાળીયા	22.271354	69.582168
2	સોડસલા	સોડસલા	ખંભાળીયા	22.289709	69.607414
3	વડત્રા	વડત્રા	ખંભાળીયા	22.205579	69.505558
4	આહીર સિંહણ	આહીર સિંહણ	ખંભાળીયા	22.22345	69.73898
5	સિધ્ધપુર	સિધ્ધપુર	ખંભાળીયા	22.105565	69.464419
6	વિરમદડ	વિરમદડ	ખંભાળીયા	22.175136	69.556452
7	સામોર	સામોર	ખંભાળીયા	22.251249	69.572502
8	કુવાડીયા	કુવાડીયા	ખંભાળીયા	22.214840	69.593007
9	માધુપુર	માધુપુર	ખંભાળીયા	22.141254	69.535989
10	પીપળીયા	પીપળીયા	ખંભાળીયા	22.130154	69.526477
11	બેરાજા	બેરાજા	ખંભાળીયા	22.2310736	69.4128519
12	નાના આસોટા	નાના આસોટા	ખંભાળીયા	22.2676638	69.4001966
13	ઠાકર શેરડી	ઠાકર શેરડી	ખંભાળીયા	22.093535	69.568445
14	પરોડીયા	પરોડીયા	ખંભાળીયા	22.336717	69.632719
15	કબર વિસોત્રી	કબર વિસોત્રી	ખંભાળીયા	22.278291	69.61078
16	હરીપર	હરીપર	ખંભાળીયા	22.238466	69.635834
17	ઝાકસીયા	ઝાકસીયા	ખંભાળીયા	22.239294	69.444582
18	દાત્રાણા	દાત્રાણા	ખંભાળીયા	22.19702	69.410345
19	ગોલણ શેરડી	ગોલણ શેરડી	ખંભાળીયા	22.07846	69.541012
20	શેઢા ભાડથર	શેઢા ભાડથર	ખંભાળીયા	22.057946	69.559446
21	વિઝંલપર	વિઝંલપર	ખંભાળીયા	22.150242	69.602584
22	વડાલીયા સિંહણ	વડાલીયા સિંહણ	ખંભાળીયા	22.277674	69.713837

	ગ્રામ				
ક્રમ	પંચાયતનું	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
	નામ				
23	સુમરા તરઘડી	સુમરા તરઘડી	ખંભાળીયા	22.205299	69.733530
24	મોટા આંબલા	મોટા આંબલા	ખંભાળીયા	22.357740	69.664392
25	નાના આંબલા	નાના આંબલા	ખંભાળીયા	22.351440	69.666325
26	કંચનપુર	કંચનપુર	ખંભાળીયા	22.234345	69.692634
27	દાંતા	દાંતા	ખંભાળીયા	22.278241	69.677257
28	સોનારડી	સોનારડી	ખંભાળીયા	22.1898451	69.4543089
29	ગોકલપર	ગોકલપર	ખંભાળીયા	22.1530837	69.4792818
30	ભાતેલ	ભાતેલ	ખંભાળીયા	22.165708	69.492019
31	જુની ફોટ	જુની ફોટ	ખંભાળીયા	22.032043	69.654195
32	નવી ફોટ	નવી ફોટ	ખંભાળીયા	22.035809	69.669164
33	લાલપરડા	લાલપરડા	ખંભાળીયા	22.008829	69.613654
34	ભીંડા	ભીંડા	ખંભાળીયા	22.091624	69.621806
35	લાલુકા	લાલુકા	ખંભાળીયા	22.043498	69.616924
36	નાના માંઢા	નાના માંઢા	ખંભાળીયા	22.194866	69.401910
37	વાડીનાર	વાડીનાર	ખંભાળીયા	22.3998304	69.7269319
38	સુતારીયા	સુતારીયા	ખંભાળીયા	22.0664271	69.7106133
39	કોટડીયા	કોટડીયા	ખંભાળીયા	22.0754637	69.6903398
40	ચુડેશ્વર	ચુડેશ્વર	ખંભાળીયા	22.336954	69.539404
41	કાલાવડ સિમાણી	કાલાવડ સિમાણી	ખંભાળીયા	22.323801	69.502953
42	ભાણખોખરી	ભાણખોખરી	ખંભાળીયા	22.092927	69.658185
43	મોટી ખોખરી	મોટી ખોખરી	ખંભાળીયા	22.034491	69.614567
44	હંજડાપર	હંજડાપર	ખંભાળીયા	22.179300	69.429930
45	ધંધુસર	ધંધુસર	ખંભાળીયા	22.191670	69.455299

ક્રમ	ગ્રામ પંચાયતનું નામ	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
46	હંસ્થલ	હંસ્થલ	ખંભાળીયા	22.218465	69.542925
47	ગોઈજ	ગોઈજ	ખંભાળીયા	22.308055	69.558748
48	આંબરડી	આંબરડી	ખંભાળીયા	22.108581	69.771027
49	દેવળીયા	દેવળીયા	ખંભાળીયા	22.113057	69.797210
50	નાગડા	નાગડા	ખંભાળીયા	22.23863	69.73260
51	સખપર	સખપર	ખંભાળીયા	22.268446	69.731100
52	મહાદેવીયા	મહાદેવીયા	ખંભાળીયા	22.203003	69.779740
53	ધરમપુર	ધરમપુર	ખંભાળીયા	22.1231	69.3952
54	બજાણા	બજાણા	ખંભાળીયા	22.0832	69.4514
55	કંડોરણા	કંડોરણા	ખંભાળીયા	22.0927	69.4400
56	રામનગર	રામનગર	ખંભાળીયા	22.111293	69.382175
57	હર્ષદપુર	હર્ષદપુર	ખંભાળીયા	22.1321	69.3755
58	હાપા લાખાસર	હાપા લાખાસર	ખંભાળીયા	22.174163	69.759717
59	પીર લાખાસર	પીર લાખાસર	ખંભાળીયા	22.161118	69.796411
60	કાઠી દેવળીયા	કાઠી દેવળીયા	ખંભાળીયા	22.324525	69.722577
61	સોઢા તરઘડી	સોઢા તરઘડી	ખંભાળીયા	22.323940	69.720456
62	શકિતનગર	શકિતનગર	ખંભાળીયા	22.196692	69.662502
63	કાકાભાઈ સિંહણ	કાકાભાઈ સિંહણ	ખંભાળીયા	22.249703	69.728378
64	ભરાશા	ભરાષ્ટા	ખંભાળીયા	22.36924018	69.70173116
65	બેહ	બેહ	ખંભાળીયા	22.2751725	69.461018
66	મોવાણ	મોવાણ	ખંભાળીયા	22.0652	69.2931
67	મોટા માંઢા	મોટા માંઢા	ખંભાળીયા	22.31554	69.670338
68	જુવાનગઢ	જુવાનગઢ	ખંભાળીયા	22.155684	69.552826
69	કોલવા	કોલવા	ખંભાળીયા	22.129880	69.698111
70	કેશોદ	કેશોદ	ખંભાળીયા	22.1217126	69.584210
71	માંઝા	માંઝા	ખંભાળીયા	22.155926	69.645140

ક્રમ	ગ્રામ પંચાયતનું નામ	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
72	લલીયા	લલીયા	ખંભાળીયા	22.132565	69.647108
73	નવા તથીયા	નવા તથીયા	ખંભાળીયા	22.132970	69.660301
74	જુના તથીયા	જુના તથીયા	ખંભાળીયા	22.110186	69.682507
75	ખજુરીયા	ખજુરીયા	ખંભાળીયા	22.167526	69.530120
76	ભટગામ	ભટગામ	ખંભાળીયા	22.1525203	69.6804908
77	કોટા	કોટા	ખંભાળીયા	22.172054	69.702012
78	કજુરડા	કજુરડા	ખંભાળીયા	22.324596	69.722616
79	ટીંબડી	ર્ટીબડી	ખંભાળીયા	22.651555	70.590379
80	ભાડથર	ભાડથર	ખંભાળીયા	22.079982	69.581425
81	ભારા બેરાજા	ભારા બેરાજા	ખંભાળીયા	22.090424	69.60712
82	ભંડારીયા–સગારીયા	ભંડારીયા–સગારીયા	ખંભાળીયા	22.089675	69.711256
83	ચારબારા	ચારબારા	ખંભાળીયા	22.286670	69.505160
84	ગઢેચી	ગઢેચી	દ્વારકા	22.3547092	69.0433399
85	બાટીસા	બાટીસા	દ્વારકા	22.3469144	69.026647
86	હમુસર	હમુસર	દ્વારકા	22.382449	69.054797
87	ગોરીયારી	ગોરીયારી	દ્વારકા	22.3469208	69.0850644
88	પાડલી	પાડલી	દ્વારકા	22.3873571	69.0347636
89	ભીમરાણા	ભીમરાણા	દ્વારકા	22.391366	69.0011306
90	મોજપ	મોજપ	દ્વારકા	22.3615004	68.9797275
91	મકનપુર	મકનપુર	દ્વારકા	22.3380113	68.97098
92	શીવરાજપુર	શીવરાજપુર	દ્વારકા	22.3279975	68.9556078
93	વરવાળા	વરવાળા	દ્વારકા	22.289686	68.965312
94	કલ્યાણપુર	કલ્યાણપુર	દ્વારકા	22.3181848	69.0395649
95	ધ્રાસણવેલ	ધ્રાસણવેલ	દ્વારકા	22.2882546	69.0405409
96	નાગેશ્વર	નાગેશ્વર	દ્વારકા	22.3352324	69.0860265

ક્રમ	ગ્રામ પંચાયતનું નામ	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
97	રાંગાશર	રાંગાશર	દ્વારકા	22.3241914	69.0818599
98	મુળવેલ	મુળવેલ	દ્રારકા	22.3380389	69.1341391
99	જુનીધ્રેવાડ	જુનીધ્રેવાડ	દ્રારકા	22.1524232	69.081591
100	નવી ધ્રેવાડ	નવી ધ્રેવાડ	દ્રારકા	22.1446921	69.0707382
101	મેરીપુર	મેરીપુર	દ્વારકા	22.1422588	69.1056399
102	નાનાભાવડા	નાનાભાવડા	દ્રારકા	22.255812	69.0733075
103	મોટાભાવડા	મોટાભાવડા	દ્રારકા	22.2388688	69.066936
104	ટોબર	ટોબર	દ્રારકા	22.2898547	69.0024988
105	મેવાસા	મેવાસા	દ્વારકા	22.2978362	69.0172695
106	વસઈ	વસઈ	દ્વારકા	22.3198506	68.9982497
107	બરડીયા	બરડીયા	દ્રારકા	22.1968459	69.018514
108	વાચ્છુ	વાચ્છુ	દ્રારકા	22.1958934	69.0367934
109	ધીશકી	ધીષ્ઠકી	દ્વારકા	22.198624	69.07006
110	ટુપણી	ટુપણી	દ્રારકા	22.2368572	69.1342313
111	ચરકલા	ચરકલા	દ્વારકા	22.202068	69.111705
112	ઓખામઢી	ઓખામઢી	દ્રારકા	22.0917508	69.1010084
113	કુરંગા	કુરંગા	દ્વારકા	22.0447508	69.1656739
114	ગોરીજા	ગોરીજા	દ્વારકા	22.162	69.060806
115	ખતુંબા	ખતુંબા	દ્વારકા	22.2872845	69.1361541
116	અણીયારી	અણીયારી	દ્વારકા	22.271547	69.1292758
117	લોવરાલી	લોવરાલી	દ્વારકા	22.177892	69.087134
118	મુળવાસર	મુળવાસર	દ્વારકા	22.2760748	69.1111923
119	કોરાડા	કોરાડા	દ્વારકા	22.2314349	69.0493396
120	શામળાસર	શામળાસર	દ્વારકા	22.370389	69.106333

ક્રમ	ગ્રામ પંચાયતનું	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
	નામ		(ligot		
121	પોસીત્રા	પોસીત્રા	દ્વારકા	22.395026	69.17302
122	રાજપરા	રાજપરા	દ્વારકા	22.3624783	69.1095764
123	મીઠાપુર	મીઠાપુર	દ્વારકા	22.4178099	69.0144241
124	ભાટીયા	ભાટીયા	કલ્યાણપુર	22.0887	69.28011
125	કલ્યાણપુર	કલ્ચાણપુર	કલ્યાણપુર	22.0164	69.40352
126	કેનેડી	કેનેડી	કલ્યાણપુર	22.04231	69.18423
127	મેવાસા	મેવાસા	કલ્યાણપુર	22.24483847	69.30760257
128	વિરપુર	વિરપુર	કલ્યાણપુર	22.25343002	69.31466525
129	રાણ	રાણ	કલ્ચાણપુર	22.177625	69.333602
130	જુવાનપુર	જુવાનપુર	કલ્યાણપુર	22.09522	69.22002
131	ભોપલકા	ભોપલકા	કલ્યાણપુર	22.121367	69.381976
132	લાંબા	લાંબા	કલ્યાણપુર	21.54034	69.18599
133	ગાંધવી	ગાંધવી	કલ્યાણપુર	21.50464	69.22019
134	ખાખરડા	ખાખરડા	કલ્ચાણપુર	22.087672	69.347898
135	નંદાણા	નંદાણા	કલ્ચાણપુર	22.129792	69.28851
136	દેવળીયા	દેવળીયા	કલ્યાણપુર	21.948097	69.379869
137	ગઢકા	ગઢકા	કલ્યાણપુર	22.0601	67.2507
138	પટેલકા	પટેલકા	કલ્યાણપુર	22.074075	69.382543
139	બાંકોડી	બાંકોડી	કલ્યાણપુર	22.03626	69.34164
140	હરીપર	હરીપર	કલ્યાણપુર	22.238667	69.635949
141	ખીરસરા	ખીરસરા	કલ્યાણપુર	21.975924	69.601811
142	ધતુરીયા	ધતુરીયા	કલ્યાણપુર	22.0064145	69.5809047
143	ચુર	ચુર	કલ્યાણપુર	22.012	69.479
144	રાજપરા	રાજપરા	કલ્યાણપુર	22.024435	69.536098

	ગ્રામ				
ક્રમ	પંચાયતનું	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
	નામ				
145	ગોરાણા	ગોરાણા	કલ્યાણપુર	21.5926	69.15002
146	ચંદ્રાવાડા	ચંદ્રાવાડા	કલ્યાણપુર	21.870213	69.467567
147	સતાપર	સતાપર	કલ્યાણપુર	21.955049	69.320552
148	માલેતા	માલેતા	કલ્યાણપુર	21.995664	69.332568
149	બામણાસા	બામણાસા	કલ્યાણપુર	22.09212	69.204918
150	<b>ઠડમતી</b> યા	<b>ઠડમતી</b> યા	કલ્યાણપુર	22.2546704	70.2954384
151	જોધપુર	જોધપુર	કલ્યાણપુર	21.982128	69.299339
152	નાવદ્રા	નાવદ્રા	કલ્યાણપુર	21.947666	69.257581
153	ભોગાત	ભોગાત	કલ્યાણપુર	21.993025	69.240881
154	ગોજીનેશ	ગોજીનેશ	કલ્યાણપુર	22.011033	69.195987
155	ວແວແ	ວແວແ	કલ્ચાણપુર	22.083	69.1151
156	ગુરગઢ	ગુરગઢ	કલ્યાણપુર	22.196247	69.191579
157	મોટા આસોટા	મોટા આસોટા	કલ્યાણપુર	22.273819	69.369445
158	મેધપર ટીટોડી	મેધપર ટીટોડી	કલ્યાણપુર	22.1415248	69.4545294
159	મ.હ્રબરડી	મ.હ્રાબ૨ડી	કલ્ચાણપુર	22.198074	69.370636
	સીદસરા-	સીદસરા	662111212	00.454000	00 440770
160	માનપરા	साटसरा	કલ્યાણપુર	22.151662	69.419772
161	ઉદેપુર	ઉદેપુર	કલ્ચાણપુર	22.146719	69.394226
162	ટંકારીયા	ટંકારીયા	કલ્યાણપુર	21.949837	69.447109
	સણૉસરી-	સણૉસરી	«C211101110	21 020270	60 41 41 22
163	પ્રેમસર	त्तपुंधत्तरा	કલ્યાણપુર	21.939379	69.414133
164	દુધીયા	દુધીયા	કલ્યાણપુર	21.98095	69.524469
165	આશીયાવદર	આશીયાવદર	કલ્યાણપુર	21.973259	69.506927
166	સુર્યાવદર	સુર્યાવદર	કલ્ચાણપુર	21.958521	69.479683

	ગ્રામ				
ક્રમ	પંચાયતનું	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
	નામ				
167	ખીજદડ	ખીજદડ	કલ્ચાણપુર	22.047	69.422
168	માંગરીયા	માંગરીયા	કલ્યાણપુર	22.036	69.465
169	જામપર	જામપર	કલ્યાણપુર	22.0675048	69.4716432
170	ધુમથર	ધુમથર	કલ્ચાણપુર	22.0736217	69.4671341
171	ચપર	ચપર	કલ્ચાણપુર	22.060184	69.494098
172	કાનપર શેરડી	કાનપર શેરડી	કલ્યાણપુર	22.6674	69.534398
173	ડાંગરવડ	ડાંગરવડ	કલ્યાણપુર	21.949959	69.512416
174	રાણપરડા	રાણપરડા	કલ્યાણપુર	21.941923	69.496138
175	નગડીયા	નગડીયા	કલ્ચાણપુર	21.971543	69.556525
176	ભાટવડીયા	ભાટવડીયા	કલ્યાણપુર	22.052076	69.22235
177	ગોકલપર	ગોકલપર	કલ્ચાણપુર	22.055827	69.254914
178	પાનેલી	પાનેલી	કલ્ચાણપુર	21.97801	69.448996
179	ચાચલાણા	ચાચલાણા	કલ્ચાણપુર	21.923222	69.3752
180	ગાંગડી	ગાંગડી	કલ્ચાણપુર	21.88929	69.359161
181	પિંડારા	પિંડારા	કલ્યાણપુર	22.241103	69.259735
182	રણજીતપુર	રણજીતપુર	કલ્યાણપુર	22.1057	69.1309
183	મહ્નદેવીયા	મહ્નદેવીયા	કલ્યાણપુર	22.1139	69.1647
184	કનકપર	કનકપર	કલ્ચાણપુર	22.0955988	69.5158685
185	માડી	માડી	કલ્ચાણપુર	22.9425	69.52691
186	આંબલીયારા	આંબલીયારા	ભાષાવડ	21.49	69.67
187	આંબરડી	આંબરડી	ભાષ્ટાવડ	21.91	69.86
188	ભરતપુર	ભરતપુર	ભાષ્ટવડ	21.46	69.58
189	ભવનેશ્વર	ભવનેશ્વર	ભાષ્ટ્રવડ	21.88	69.68
190	ભેનકવડ	ભેનકવડ	ભાષ્ટ્રાવડ	21.87	69.26
191	ભોરીયા– ફોટડી	ભોરીયા– ફોટડી	ભાષાવડ	22.04	69.85

	ગ્રામ				_
ક્રમ	પંચાયતનું	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
	નામ				
192	બોડકી	બોડકી	ભાણવડ	22.13	69.94
193	ચાંદવડ	ચાંદવડ	ભાણવડ	22.04	70.11
194	ચોખંડા	ચોખંડા	ભાષાવડ	22.04	69.46
195	ધારાગર	ધારાગર	ભાષાવડ	22	69.85
196	ઢેબર	ઢેબર	ભાષ્ટવડ	21.53	69.41
197	દુધાળા	દુધાળા	ભાષ્ટવડ	21.98	69.8
198	કતેપુર	કતેપુર	ભાષ્ટવડ	21.94	69.82
199	ગડુ	ગડુ	ભાષ્ટવડ	21.85	69.65
200	ઘુમલી	ઘુમલી	ભાષ્ટવડ	21.52	69.45
201	ગુંદા	ગુંદા	ભાષ્ટવડ	22	69.71
202	ગુંદલા	ગુંદલા	ભાષ્ટવડ	22.19	70.01
203	હાથલા	હાથલા	ભાષ્ટવડ	21.85	69.65
204	જંબુસર	જંબુસર	ભાષ્ટવડ	21.83	69.85
205	જામપર	જામપર	ભાષાવડ	22.05	69.76
206	જશાપર	જશાપર	ભાષાવડ	21.85	69.80
207	ઝારેરા	ઝારેરા	ભાષ્ટવડ	21.9	69.64
208	જોગરા	જોગરા	ભાષ્ટવડ	22.07	69.81
209	કબરકા	કબરકા	ભાષ્ટવડ	22.06	69.83
210	કલ્યાણપુર	કલ્યાણપુર	ભાષ્ટવડ	21.85	69.85
211	કાટકોલા	કાટકોલા	ભાષ્ટવડ	21.86	69.87
212	કૃષ્ણગઢ	કૃષ્ણગઢ	ભાષ્ટવડ	21.95	69.91
213	માનપર	માનપર	ભાષ્ટવડ	22.01	69.87
214	મેવાસા	મેવાસા	ભાષ્ટવડ	21.9	69.78
215	મોડપર	મોડપર	ભાષ્ટવડ	21.85	69.8
216	મોખાણા	મોખાણા	ભાષ્ટવડ	21.9	69.73
217	મોરઝર	મોરઝર	ભાષ્ટવડ	22.01	69.79
218	મોટા કાલાવડ	મોટા કાલાવડ	ભાષ્ટાવડ	21.9	69.83

ક્રમ	ગ્રામ પંચાયતનું નામ	ગામ	તાલુકો	અક્ષાંશ	રેખાંશ
219	નવાગામ	નવાગામ	ભાષ્ટવડ	21.97	69.77
220	પાછતર	પાછતર	ભાણવડ	21.86	69.68
221	પાછતરડી	પાછતરડી	ભાષ્ટવડ	21.87	69.68
222	રાણપર	રાણપર	ભાષાવડ	21.51	69.4
223	રાણપરડા	રાણપરડા	ભાષાવડ	21.92	69.74
224	રેટા કાલાવડ – કંટોલીયા	રેટા કાલાવડ – કંટોલીયા	ભાષ્ટાવડ	21.98	69.65
225	રોઝડા	રોઝડા	ભાષ્ટવડ	21.81	69.62
226	રોજીવાડા	રોજીવાડા	ભાણવડ	21.97	69.73
227	રૂપામોરા	રૂપામોરા	ભાણવડ	21.94	69.74
228	સઈ દેવળીયા	સઈ દેવળીયા	ભાષ્ટવડ	21.98	69.81
229	સાજડીયારી	સાજડીયારી	ભાણવડ	21.98	69.68
230	સણખલા	સણખલા	ભાષ્ટવડ	21.93	69.63
231	સેવક દેવળીયા	સેવક દેવળીયા	ભાષ્ટવડ	22	69.77
232	શેઢાખાઈ	શેઢાખાઈ	ભાણવડ	22.04	69.8
233	શિવા	શિવા	ભાણવડ	21.88	69.88
234	ટીંબડી	ટીંબડી	ભાણવડ	21.88	69.97
235	वानावऽ	वानावऽ	ભાણવડ	21.9	69.95
236	વેરાડ	વેરાડ	ભાણવડ	21.94	69.86
237	વિજયપુર	વિજયપુર	ભાષ્ટવડ	21.91	69.67

## Annexure: 25 Port Signal

PORT STORM WARNING SIGNAL NO.	DAY SIGNAL	NIGHT SIGNAL	MEANING
1		$\begin{pmatrix} \bullet \\ \bullet $	DISTANT CAUTIONARY (There is a region of squally weather in which a storm may be forming.)
2		•	DISTANT WARNING ( A storm has formed.)
3	$\mathbf{+}$	¢	LOCAL CAUTIONARY (The port is threatened by squally weather.)
4		¢	LOCAL WARNING ( The port is threatened by a storm but it does not appear that the danger is as yet sufficiently great to justify extreme measures of precaution.)
5	¥	¢ •	DANGER (The port will experience severe weather from a cyclone expected to move keeping the port to the left of its track. )
6	*		DANGER ( The port will experience severe weather from a cyclone expected to move keeping the port to the right of its track. )
7	*		DANGER ( The port will experience severe weather from a cyclone expected to move over or close to the port. )
8	<b>I</b>		GREAT DANGER ( The port will experience severe weather from a severe cyclone expected to move keeping the port to the left of its track.)
9			GREAT DANGER ( The port will experience severe weather from a severe cyclone expected to move keeping the port to the right of its track.)
10	×	•	GREAT DANGER ( <i>The port will experience severe weather from a</i> severe cyclone expected to move over or close to the port. )
11	*	¢	FAILURE OF COMMUNICATIONS ( Communications with the Meteorological Warning center have broken down and the local officer considers that there is danger of bad weather.)

## List of Abbreviations

	As misselferent Das have Marshet Committee		
APMC	Agricultural Produce Market Committee		
AE	Assistant Engineer		
AH	Animal Husbandry		
ATI	Administrative Training Institute		
ATS	Anti Terrorist Squad		
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		
DDO	District Disaster Wanagement Tran District Development Officer		
DEOC	District Development Officer District Emergency Operation Centre		
DGVCL	Dakshin Gujarat Vij Company Limited		
DISH	Directorate of Industrial Safety and Health		
DISIT	Disaster Management		
DPO	<u> </u>		
DRM	District Project Officer Disaster Risk Management		
DRM	Disaster Risk Management Disaster Risk Reduction		
DSO			
DSP	District Sports Officer		
	Deputy Superintendent of Police		
Dy. Eng.	Deputy Engineer		
Dy SP	Deputy Superintendent of Police		
EMRI	Emergency Management & Research Institute		
ESR	Elevated Surface Reservoir		
EWS	Early Warning System		
Ex. Eng.	Executive Engineers		
FCI	Food Corporation of India		
FPS	Fair Price Shop		
FWP	Food for Work Program		
GDCR	General Development Control Regulation		
GEB	Gujarat Electricity Board		
GIDM	Gujarat Institute of Disaster Management		
GLR	Ground Level Reservoir		
GMB	Gujarat Maritime Board		
GoI	Government of India		
GPs	Gram Pranchayats		
GSDMA	Gujarat State Disaster Management Authority		
GWSSB	Gujarat Water Supply and Sewerage Board		
HFA	Hyogo Framework for Action		
HHs	Households		
HPC	High Powered Committee		

HQ	Head Quarter		
HRVC	Hazard, Risk, Vulnerability and Capacity		
IAY	Indira Aawas Yojana		
IMA	Indian Medical Association		
ICS	Incident Commander		
ICS	Incident Command System		
IDNDR	International Decade for Natural Disaster Reduction		
IEC	Information Education Communication		
IMD	Indian Meteorological Department		
ISDR	International Strategy for Disaster Reduction		
ISR	Institute for Seismic Research		
ITI	Industrial Training Institute		
IWMP	Integrated Watershed Management Program		
LCMG	Local Crisis Management Group		
LO	Liaison Officer		
MAH	Major Accident Hazard		
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act		
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme		
MHA	Ministry of Home Affairs		
MLA	Member of Legislative Assembly		
Mm	Mili Meter		
MP	Member of Parliament		
NAPCC	National Action Plan on Climate Change		
NCC	National Cadets Corps		
NCCF	National Calamity Contingency Fund		
NDM	National Disaster Management		
NDMA	National Disaster Management Authority		
NDRF			
NDRF	National Disaster Response Force National Disaster Response Force		
	National Disaster Response Force		
NEC			
NFSM	National Food Security Mission		
NGO	Non Government Organization		
NIDM	National Institute of Disaster Management		
NRDWP	National Rural Drinking Water Program		
NRHM	National Rural Health Mission		
NSS	National Service Scheme		
NYK	National Yuva Kendra		
PCPIR	Petroleum Chemical and Petrochemical Special Investment Region		
PDS	Public Distribution System		
PHC	Primary Health Center		
PI	Police Inspector		
PMGY	Pradhan Mantri Gramodyan Yojna		
PRIs	Panchayati Raj Institutions		
R & R	Recovery & Reconstruction		
R&B	Roads & Buildings		
RTO	Regional Transport Office		
SC	Scheduled Caste		
SDM	Sub District Magistrate		
SDMA	State Disaster Management Authority		
SDRF	State Disaster Response Fund		

SDRN	State Disaster Response Network		
SE	Superintending Engineer		
SEOC	State Emergency Operation Centre		
SFO	Sub Focal Officer		
SEZ	Special Economic Zone		
SHGs	Self Help Groups		
SMC	School Management Committee		
SMS	Short Message Service		
SOP	Standard Operating Procedure		
SRPF	State Reserve Police Force		
SRT	Special Response Team		
SSA	Sarva Shiksha Abhiyan		
ST	Scheduled Tribe		
S& R	Search and Rescue		
Supt. Eng.	Superintendent Engineer		
SWO	Social Welfare Officer		
TDMA	Taluka Disaster Management Authority		
TDMC	Taluka Disaster Management Committee		
TDMP	Taluka Disaster Management Plan		
TDO	Taluka Development Officer		
TEOC	Taluka Emergency Operation Centre		
THO	Taluka Health Officer		
TNA	Training Needs Assessment		
TSC	Total Sanitation Campaign		
TSO	Taluka Supply Officer		
ULB	Urban Local Body		
UNDP	United Nations Development Programme		
UNFCC	United Nations Framework Convention on Climate Change		
VDMP	Village Disaster Management Plan		
VIPs	Very Important Persons		
VVIPs	Very Very Important Persons		
WASMO	Water and Sanitation Management Organization		