

Emergency Care for Local Address Hidalgo National Water Commission

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Abstract

The National Water Commission (Conagua) was born on January 16, 1989 as a decentralized body of the Secretariat of Environment and Natural Resources, to address all matters related to the administration of national waters and their inherent public goods. The creation of Conagua is because the federal government recognized the strategic value of water, with the premise that a country without water, can not develop. The agencies that preceded it, were responsible for the construction of infrastructure required by the country; however, the task currently is the preservation of water, with the participation of the 3 levels of government and organized society. One of the guiding objectives of Conagua is "Preventing the risks arising from hydrometeorological events and attend to their effects." To address this guiding objective, the Local Address Conagua has been organized to address the meteorological contingencies arising in Hidalgo, in coordination with the State Government; It has developed planning risk management.

Water management, weather, prevention, risk management.

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Introduction

Mexico because of its geographical location is vulnerable to various hydroclimatological extraordinary phenomena, especially to tropical cyclones, whose season formally starts on May 15 for the Pacific Ocean and June 1 for the Atlantic; They conclude on November 30 on both coasts. 2016 14 Tropical Cyclones for the Pacific and 15 are forecast for the Atlantic.

In modern history, hurricanes are remembered by their magnitude and degree of destruction; in the case of Gilberto and Diana in the 80 that hit the coast of the Gulf of Mexico. In 1997 Hurricane Pauline destroying important infrastructure in the states of Guerrero and Oaxaca, one year after Mitch was presented causing destruction in Chiapas was presented. 2005 was an extraordinary season with 27 systems (14 hurricanes and 13 tropical storms), some very intense as Emily, Katrina, Rita and Wilma category V, Dennis Category IV, and Mary and Beta Category III on the scale Zafiro-Simpson; during this Season Seven cyclones hit directly on the coast of Mexico, Hurricane Emily and Tropical Storm Stan, both crossed the Yucatan Peninsula causing significant damage to the infrastructure of the city of Cancun and followed his career over the Gulf of Mexico, touching earth a second time on the coasts of the states of Tamaulipas and Veracruz.

In 1999, Tropical Depression No. 11, which remained semi-stationary interaction with the cold front # 5 was presented, prompting accumulated rainfall of 243 mm height, causing significant damage to the infrastructure of the Valley of Tulancingo. In 2007 Hurricane Dean brought large volumes of water and new account infrastructure damage were taken in the region of Tulancingo. In 2011 Hurricane "Arlene" that provoked strong presipitaciones was presented; however, there was extensive damage, as drainage infrastructure had been rehabilitated.

Derived from these events among others, the National Water Commission has gained experience in handling these emergencies.

Their participation in the care of emergencies in its field of competence, has been essential to prevent these increase their scale and focuses its activities on providing drinking water to the affected population, take actions sanitation and reconstruction of the infraestructura of potable water to restore its operation, drainage and irrigation systems.

In recent years, Conagua has been transformed for the mandated activities efficiently and has defined its mission and vision as:

Mission:

"To manage and preserve national waters, with the participation of society to achieve sustainable resource use."

View:

"Being a regulatory and technical authority and promoting the participation of society and levels of government in water management body".

From 2006 Conagua has developed and strengthened its strategic planning, which has enabled it to clearly define its strategic objectives to be achieved. In this vein one of its objectives is to "prevent risks related to hydrometeorological events and attend to their effects."

In 1999, Tropical Depression No. 11 was parked off the coast of Veracruz, causing moisture penetration in the states of Veracruz and Hidalgo mainly causing heavy and intense rains for several days (from 4 to 7 October).

For the particular case of the state of Hidalgo these occurred on the basins of the Metztitlán, Tulancingo and Avenidas river, causing damage among others to the city of Tulancingo and surrounding communities, as well as La Vega de Metztitlán and localities near the lagoon Metztitlán. Local Address Hidalgo Conagua, was coordinated with the State System of Civil Protection and other state and federal agencies of the executive, to develop actions to mitigate the impact of floods; subsequently, Conagua continued reconstruction and prevention actions to minimize possible damage to the population to another extraordinary rain.

Local Address it assisted in a timely manner to the disaster zone was declared and therefore could be applied FONDEN resources. Drinking water systems that were rebuilt amount to approximately 76 at a cost of \$ 2,581,717.00; and hydro-agricultural infrastructure Tula Irrigation District 003, 008 and 028 Metztitlán Tulancingo, with an investment of \$ 31,301,320.00 was also rebuilt.

Risk management

In order to be more efficient care hydroclimatological contingencies, is developing a program called "Planning for Emergency Management", where human and material resources are clearly established available to the Local Address Hidalgo, for situations emergency and prevention.

Formally technical-administrative groups responsible for coordinating and addressing, in the area of competence settled, possible emergencies Hydroclimatological named "Task Force", which is in charge of Local Director and Group Captain.

The staff assigned to each group depends on the magnitude of the emergency.

The team captain is responsible for coordinating preventive actions and actions during and after the event; he joined the inter-agency group, whose leader is in command state governor, who presented the report occurred damage.

The operating group is responsible for information on the damage and present the respective Group Captain report.

The governing body has the responsibility to provide for the staff involved in emergency care has the necessary resources to perform the task.

Also, the task force has other areas of support:

- Communication Systems
- Drinking water production
- Water supply
- Assessment districts and irrigation units
- Basic sanitation
- Operation specialized emergency teams

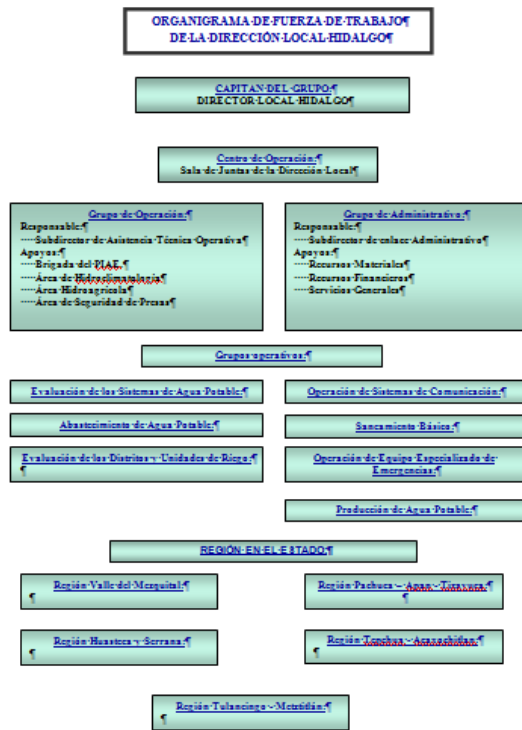


Figure 1 Flowchart Workforce

The group structure "Task Force" has also been organized according to the different regions of the state, considering the foreign facilities that comprise the Local Address:

- Region Valle del Mezquital
- Pachuca-Apan-Tizayuca Region
- Huasteca region and Serrana
- Region Tehuacan-Acaxochitlán
- Region Tulancingo-Metztlán

Phase I called Surveillance, starts from June 1 and ends on November 30, during this stage the operation group monitors the hydroclimatological events, with information provided by the Division of the National Weather Service and with the help of satellite images, as long as there is not any system affecting the country, bulletins are issued every 24 or 12 hrs.

Phase II called Early Warning starts at a cyclone in the Atlantic mainly that could approach the national territory, while it is more than 500 kilometers of national coasts, during which notices with information provided by the Branch issued detected National Weather Service every 6 hours.

Alert Phase III called Emergent, begins when a cyclone is 500 kilometers or less of the national territory, from the time notices are issued with information provided by the National Weather Service Branch every 3 hours; notices in the position of the cyclone, its possible path, prognosis and areas of possible effects is included.

The captain of the group, with the information collected informs the state board of civil protection, through its technical secretary, who is responsible for raising awareness of the arousal of public awareness and disseminating the recommendations before, during and after the phenomenon instance. Conagua also contributes with information provision and fostered a culture of prevention before extraordinary hydrometeorological phenomena.

The state board of civil protection is organized as follows:



Figure 2 Organization of the State Council of Civil Protection

State characterization

The state covers an area of 20,905.12 square kilometers, constituting 1.1% of the national territory and has 2'235,591 inhabitants of which 50.7% are located in rural areas and 49.3% in urban areas. Hidalgoense 94.7% of the territory is located in the hydrologic region 26 panuco and 5.3% in the hydrologic region 27 Tuxpan-Nautla, with an average annual rainfall of 821 millimeters.

The state is divided into 84 municipalities and 4,749 localities, of which 4,643 are less than 2,500 inhabitants, 93 people between 2,500 to 20,000 inhabitants, 11 have between 20,000 to 50,000 inhabitants and 2 with more than 50,000.

High-risk areas to extreme events

As already he mentioned the Local Address has regionalized state based on the distribution of staff and infrastructure, but also in each defined region has established the type of risk that may occur.

Huasteca region

Flood

- (46) Orizatlán
- (32) Jaltocán
- (28) Huejutla de Reyes
- (26) Huazalingo
- (11) Atlapexco
- (80) Yahualica

Tizayuca-Pachuca-Apan region

Flood

- (69) Tizayuca
- (48) Pachuca
- (51) Mineral de la Reforma
- (22) Epazoyucan
- (83) Zempoala

- (72) Tlanalapa
- (61) Tepeapulco
- (08) Apan

Actopan-Tula region-Ixmiquilpan

Flood

- (30) Ixmiquilpan
- (50) Progress Obregon
- (54) San Salvador
- (03) Actopan
- (23) Francisco I. Madero
- (41) Mixquiahuala
- (05) Ajacuba
- (70) Tlahuelilpan
- (65) Tetepango
- (74) Tlaxcoapan
- (10) Atitalaquia
- (76) Tula de Allende

Serrana region

by mudslides

- (49) Pisaflores
- (40) The Mission
- (34) Lolotla
- (14) Calnali
- (20) Eloxochitlan
- (31) Jacala de Ledesma
- (62) Tepehuacan Gro.
- (18) Chapulhuacan
- (42) Molango de Escamilla
- (33) Juarez Hidalgo
- (81) Zacualtipan Angeles
- (36) San Agustin Metzquititlan
- (79) Xochicoatlán
- (37) Metztitlan
- (68) Tianguistengo
- (73) Tlanchinol
- (71) Tlahuiltepa

Region Tepehua

Flood and Mudslides

- (53) San Bartolo Tutotepec
- (27) Huehuetla

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- (04) Agua Blanca de Iturbide
- (60) Tenango de Doria
- (35) Metepec

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Vega region Metztitlan-Tulancingo

Flood and Landslide

- (37) Metztitlan
- (12) Atotonilco el Grande
- (24) Huasca de Ocampo
- (45) Omitlán de Juárez
- (01) Acatlan
- (77) Tulancingo
- (02) Acaxochitlan
- (16) Cuauhtepc de Hinojosa

Conclusions

The experience gained by the Local Address Hidalgo Conagua in emergency care by extraordinary hydroclimatológicos phenomena has been very helpful and has established an order for care, particularly through the creation of specialized groups in different tasks required implement in these situations, and according to the vulnerability of the geographic regions of the state of Hidalgo.

It would be interesting and of great benefit carry out exchange of experiences among states that have attended emergencies such as those described and submit vulnerability to the effect of extraordinary hydroclimatological phenomena, in order to enrich the strategies to be followed in these situations and in involving the responsible for state and municipal governments.

References

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