Disaster Risk Reduction Management Plan

2024

Chapter I

1.1 Introduction

Water crises and climate change are Kapatagan Water District's societal and economic risks. Disaster as a whole has the ability to kill people and the service in providing water as well. It is crucial that in the aftermath of a disaster a water supply is operational as soon as possible to minimize the outbreak of diseases that may exacerbate the disaster.

Several earthquakes have been adversely affected water sources and have caused damage to pipelines, reservoirs and pump houses. The recent deluge of disasters in many parts of the world has provoked governments around the world to put in place Disaster Risk Reduction Management Plan. In the Philippines, we have Republic Act No. 10211 or the Philippine Disaster Risk Reduction and Management Act of 2010 which institutionalizes risk reduction and management plans at the local level. Among others, the law mandates the creations of local risk reduction and management office in all provinces, cities, municipalities and barangays which shall be responsible for setting the direction, development, implementation and coordination of disaster risk management programs within their territorial jurisdiction.

Generally, there are two (2) types of disasters that we have to contend with and prepare for to wit:

1) Natural Disasters

Urban Infrastructure is highly vulnerable to natural disasters. Failures of these structures, such as water supply and other pipeline systems will most likely result to major impacts in terms of human lives and economic losses. Natural disasters can be any or combination of the following:

a) Typhoons
b) Floods
c) Heavy monsoon rains
d) Tsunamis
e) El Nino phenomenon
f) Droughts

g) Biological agents (micro-organisms, insects or vermin infestations)
h) Earthquakes
i) Volcanic eruptions
j) Hurricanes

2) Man-Made Disasters or Human Induced Disasters

Damage to or destruction of water supply facilities by terrorists attacks cam disrupt the delivery of vital human services, threaten public health and may even cause loss of lives. Some man-made disasters are:

a) Acts of war and terrorism
b) Fires/Conflagration
c) Explosions
d) Chemical Spills
e) Power Failures
f) Systems Failures
g) Accidents

Disasters in the operations of the Kapatagan Water District may also occur due to neglect and/or failure of the organization to properly institute and adhere to maintenance procedures.

The concern now is whether Kapatagan Water District can respond to disasters to avert its negative effects on water services due to contamination of water supplies, prolonged discontinuity of service, loss of fire-fighting capability and release of chlorine in the air among others.

1.2. Disaster Risk Reduction Management Plan

When a disaster hits the country, it is not always the national government that acts first. Kapatagan Water District is tasked to come up with a framework for disaster risk reduction and management as well as supervise preparations for, and responses to, natural calamities and human induces disasters. Kapatagan Water District is expected to be at the frontline of emergency measures in the aftermath of disasters to ensure the general welfare of its concessionaires.

Though one must always remember that it is not always possible to completely eliminate a risk, extensive experience and practice in the past have demonstrated that the damage caused by any disaster can be minimized largely by disaster preparedness, response, prevention and mitigation and rehabilitation and recovery.

The Disaster Risk Reduction Management Plan is consistent with the National Disaster Risk reduction Management Plan in which Republic Act 10121 is the enabling law and be implemented by the District's Officers and employees.

The Disaster Risk Reduction Management Plan of the Kapatagan Water District is to be seen as an information guide to the relevant role players. It is a continuing process to be developed and it will always be everybody's business. The workflow and coordination is supposed to ensure and facilitate quick response before, during and after disaster situations.

1.3. Purpose of the Disaster Risk Reduction Management Plan

The Disaster Risk Reduction Management Plan of the Kapatagan Water District aims to ensure the least possible impact on water supply and its public image during and after emergency and disaster situations. It also aims to enhance the capacity of the Kapatagan Water District to prevent and to deal with disaster and to avoid developments which are subject to high risk of disaster.

Specifically, this plan aims to:

a) Provide policies and procedures to maintain quantity and quality of service even during adverse conditions;

b) Identify potential disaster situations and the methods for responding to these situations quickly and effectively;

c) Facilitate decision-making on critical issues in a potentially stressful environment and define responsibilities and roles during a crisis situation;

d) Establish guidelines in addressing public relations and communications issues that may potentially arise from disaster, dealing with the media and communicating with the concessionaires;

e) Protect employees and concessionaires, both minimizing injury and maintaining their security and integrity;

f) Protect the properties of the Kapatagan Water District; and

g) Protect the public image of the Kapatagan Water District and restore when necessary, after a disaster.

This Plan is also in accordance with the NDRRMP in which the four (4) distinct yet mutually reinforcing priority areas are to be achieved namely:

a) Disaster Prevention and Mitigation

b) Disaster Preparedness;

c) Disaster Response; and

d) Disaster Recovery and Rehabilitation.

Each priority area has its own long term goal, which when put together will lead to the attainment of the District and the country's over- all goal and vision in DRRM. It is crucial to have an effective and efficient Disaster Risk Management Plan in order to save lives, properties and prevent escalation of emergencies and incidents and relieve suffering.

1.4. Phases of Disaster Risk Management

The Disaster Risk reduction Management Plan involves the following phases:

1) Disaster Prevention and Mitigation – Measures taken in advance of a hazard impact aimed at reducing its impact on society and environment. The activities include are:

a. Hazard/risk identification and assessment – develop, update and disseminate hazard maps and related information to decision makers, general public and communities at risk.
b. Enforcement of zoning, land-use and building and fire codes.
c. Integrating/mainstreaming disaster risk management
d. Developing early warning systems that are people-centered timely and understandable to those at risk

2) Disaster Preparedness – measures undertaken to prepare people to react appropriately during and following such emergencies. It involves the following activities:

Planning – disaster management plans, contingency plans, SOPs etc,

Advocacy – information dissemination through mass media, enhancing people's awareness through the conduct of disaster management fora/briefing, observance of disaster consciousness month, etc.

Education and training of officers, employees, deputized coordinators, KAPWDDRRMT, volunteers. The conduct of drills and exercises, community based disaster risk management trainings.

Resources – The 5Ms which are manpower, materials, methods, machines and money.

3) Disaster Response – undertaken immediately following the emergency. Such measures are directed towards saving life, property, and dealing with the immediate damage caused by the disaster. Below are the activities associated with response:

a. Early warning – timely and rapid dissemination of warnings to threatened communities/population
b. Notification – mobilization and activation of response team
c. The "Golden Hour" Principle – the time within which most lives could be saved and injuries minimized
d. Incident Command System – on scene management of disaster operation activities.

4) Disaster Recovery and Rehabilitation – includes measures undertake to restore affected communities/areas to their proper or normal level of functioning and development with reduces vulnerability and increased sustainability. This can be categorized into:

1) Short Term – restoring necessary lifeline systems (i.e. power, communications, water and sewerage, transportation, etc.) providing for basic human needs (food, clothing and shelter) and monitoring law and order

2) Long Term – restoring economic activity and development, rebuilding community facilities and housing, healing, repair and reconstruction in a way that is less vulnerable to future hazard impacts.

c) The Cluster Approach – which is in line with the United Nations Humanitarian Reform Agenda in pursuing a reform program that seeks to improve the effectiveness of humanitarian response by ensuring greater predictability, accountability, and partnership.

1.5. Acronyms and Abbreviations

KAPWD	Kapatagan Water District
KAPWDDRRMP	KapataganWater District-Disaster Risk Reduction Management Plan
KAPWDDRRMT	Kapatagan Water District-Disaster Risk Reduction Management Team
BDRRMC	Barangay Disaster Risk Reduction Management Council
CCA	Climate Change Adaptation
CCC	Climate Change Commission
CDRRMC	City Disaster Risk Reduction Management Council
CHED	Commission on Higher Education
DA	Department of Agriculture

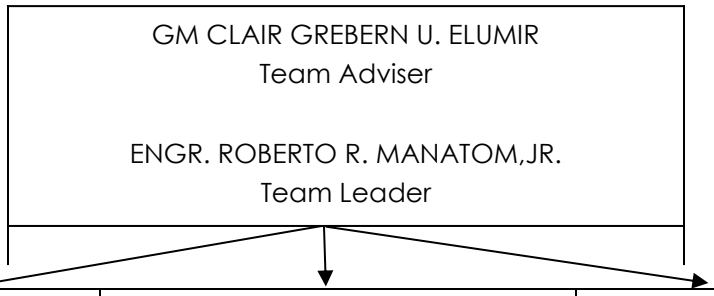
DAR	Department of Agrarian reform
DENR	Department of Environment and Natural Resources
DepEd	Department of Education
DILG	Department of Interior and Local Government
DOE	Department of Energy
DOH	Department of Health
DOST	Department of Science and Technology
DPWH	Department of Public Works and Highways
DRR	Disaster Risk reduction
DRRMP	Disaster Risk Reduction Management Plan
DSWD	Department of Social Welfare and Development
IEC	Information, Education and Communication
LGU	Local Government Unit
LWUA	Local Water Utilities Administration
MDG	Millenium Development Goals
NDRRMC	National Disaster Reduction Management Council
NEDA	National Economic and Development Authority
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PAR	Philippine Area of Responsibility
PDP	Philippine Development Plan
PDRRMC	Provincial Disaster Risk Reduction Management Council

Chapter II

2.1. Kapatagan Water District – Disaster Risk Reduction Management Team (KAPWD DRRMT) Structure

The Kapatagan Water District Disaster Reduction Risk Management Team (KAPWDDRRMT) is a working team of officers and employees of the Kapatagan Water District established pursuant to Republic Act No. 10121 series of 2009. It is led by the General Manager of KAPWD. The Team is responsible for ensuring the protection and welfare of the KAPWD concessionaires and its employees, people and the community during disasters or emergencies.

KAPWDDRRMT STRUCTURE



EARLY WARNING TEAM (Prevention, Mitigation and Preparedness)	RESCUE AND EVACUATION TEAM (Response)	ASSESSMENT AND NEEDS ANALYSIS TEAM (Recovery and Rehabilitation)
CHERIEBELLE T. DEVARAS	DINNO B. GALBINES	ENGR. ROBERTO R. MANATOM, JR.
RAUL C. CARREON, JR.	ANTONIO C. ORTIZ, JR.	DANILO C. TARIMAN
ZOSSIMO L. JANIOLA	ROMEL T. ENCLONAR TEAM	FELICIO L. GOC-ONG
LEEVENA B. ESGUERRA	NICK J. REYES TEAM	FRANZ JOSEPH M. LUARDO TEAM
DARYL ENGELBERT C. EYA	JHUFER S. YONSON	ROBERT C. PAGENTE

2.2. Composition of the KAPWDDRRMT

The KAPWDDRRMT is a working team of the KAPWD in charge of planning, organizing and guiding the use of human, materials and financial resources and implementation of the four distinct yet mutually reinforcing priority areas, namely: (a) Disaster Prevention and Mitigation;
(b) Disaster Preparedness; (c) Disaster Response; and (d) Disaster Recovery and Rehabilitation. Each priority area has its own long term goal, which when put together will lead to attainment of KAPWD's over-all vision/goal in DRRMP.

These priority areas are not autonomous from the other nor do they have clear start and end points. The 4 priority areas are not seen as mere cycle which starts in prevention and mitigation and ends in rehabilitation and recovery. They are:

a) Mutually reinforce to each other and are interoperable;
b) Do not, Should not, and Cannot stand alone;
c) Has no clear starting or ending points between each of the aspects and overlaps are to be expected;
d) Are problem needs and asset strengths centered; and
e) All point to one direction which is to reduce people's vulnerabilities and increasing their capabilities.

Team	Responsibility
Team Adviser	**1**. Establishes policy guidelines and set priorities in the allocations of resources and facilities; **2.** Direct and coordinate all the **KAPWDDRRM** teams of the **KAPWD;** **3.** Direct and monitors all Emergency activities; **4.** Assigns personnel as needed; **5.** Advises the team leader to closely monitor information/Advisory given by warning agencies; and **6.** Announces the suspension of offices on the basis of advisories given by warning agencies;
Team leader	**1.** Reports to the GM all the activities of the **KAPWDDRRMT;** **2.** Overseas the activities all teams; **3.** Coordinate with LDRRMC and other warning agencies of the plans of actions of the **KAPWDDRRMT** when Ever crisis occurs; **4**. Monitor the probable consequences of potential, on-going and past disaster;

	5. Coordinate pre-defined and post disaster operational activities being undertaken by the **KAPWDDRRMT;** 6. Notifies and updates the GM on the status of water quality, productions and distribution immediately before, during and after the disasters; **7.** Determines the resumption of normal operation can begin; 8. Assets the conditions of structural, electrical, and mechanical components of all facilities of **KAPWD** including but not limited to the pump stations, transmissions and distribution lines and reservoirs; **9.** Does related work as may be assigned by the **GM**.
Early Warning Team (Prevention, Mitigation and Preparedness)	**1.** Provide warning in close coordination with warning agencies and through all available means to the service areas, concessionaires and employees and providing a clear understanding of what to expect and advises on appropriate precautionary measures to be undertaken; **2.** Alert the **KAPWDDRRMT** and closely monitor the conduct of disaster response operations, mobilizing additional resources available as may be needed in the field; **3.** Maintain and update database of relevant baseline information (Pimp Stations); **4.** Documents all past disaster situations to include a review of the pre-post disaster activities undertaken by all key actors, and maintain a database of these documents; **5.** Determine courses of actions to be taken based on the recommendation of the Team Leader; **6.** Coordinates with the Rescue and Evacuation Team of the operations being undertaken and those to be implemented;
Rescue and Evacuation Team (Disaster Responses)	**1.** Ensure availability of personnel and materials and maintain a current list of personnel locations; **2.** in the event of evacuation account all personal and immediately inform the **KAPWDDRRMT** of any missing personnel; **3.** facilities flow of information to offices and employees; **4.** Coordinate the administrations of First Aid including the identification and disposition of People receiving such care. **5.** Ensure availability of in-house and rental vehicles and machinery for quick mobilization; **7.** Determine the safest route out of an emergency area and ensure security of people and property; **8.** Assist the Police in determining the disasters and the situations; **9.** In case of fire, assign a sub-group to the fire scene and coordinate with the **BFP** to prevent looting and looters;

	10. Systematically store properties brought to the evacuation area and safeguard their release to their respective owners; **11**. maintains a guarding system for personnel, materials and other Installations; **12**. make an inventory of the returned documents, equipment, and supplies and submit a report of losses/damaged to the Team Leader and who shall submit the same to the GM; **13.** Maintain an adequate sanitation and hygienic standards and deal with matters related to emergency services; **14.** Monitor the storage of medicines, goods, food, drinking water, equipment, machineries and other supplies; **15.** Do related work as the need arises; **16.** Organize and supervise the evacuation, search and rescue, fire suppression; and rehabilitation; **17.** Determine courses of action to be taken based on the recommendations of the Team Leader of the GM; **18.** Systematically evacuate personnel, properties and records during emergency situations; **19.** Upon receipt of information from the Early Warning Team, the Team shall immediately establish an evacuation in the ff order of priority: occupants of the building especially the injured; cash; valuable documents and records; personal belongings of personnel; office equipment and other movable facilities; **20.** Locate/remove injured or trapped persons in the area; **21**. Obtain appropriate equipment for search and rescue operations; **22.** Coordinate with CDRRMC and other response agencies on matters relative to search and rescue operations;

Damage assessment and needs analysis Team (Disaster Recovery and Rehabilitation.	**1**. Evaluate crisis situations and determine courses of actions to be followed, formulate guideline in assessing the situation; **2.** Assess information and advice the Team Leader of KAPWDDRRMT on possible measures to be undertaken in order to lessen the impact of the crisis; **3.** Submit recommendation for allocation of needed resource; **4.** Coordinate the plans and actions of the KAPWDDRRMT with the proper authorities; 5. Monitor the problem consequences of potential, on-going and past disasters or emergency situations around the country in close coordinate with other water districts; 6. Coordinate pre-defined and post disaster operational activities being undertaken by relevant agencies and ensure that all key actor are taken on board; 7. Initiate and lead the conduct of damage and needs assessment mission as the post disaster situation warrant; 8. Facilitate the conduct of debriefing of past disaster situation to look into areas of strength and areas for improvement; 9. allocate working stations of all teams; 10. Conduct monitoring and damage assessment of KAPWD properties and reports the same to the Team Leader as to the GM; 11. Validate report and determine damage for budget allocation; 12. Repair and rehabilitate damage structures; 13. Recommend appropriate intervention for damage structures;

2.3. Functions of the KAPWDDRRMT

The role of Kapatagan Water District Disaster Risk Reduction Management Team is to conceptualize the promotion of hazard/disaster awareness, to manage impacts, and to help all employees and the community to reduce the risk of threats from natural and human-made/induced disasters.

The Disaster Risk Reduction Management Plan of the Kapatagan Water District provides procedures pursuant to Republic Act 10121 otherwise known as the Philippine Disaster Risk Reduction and Management Act of 2010. This Manual serves as the guide of the KAPWDDRRMT not just from the disaster preparedness and response but on how to manage and reduce risk. The adopted 4-phase strategy: prevention and mitigation, preparedness, response and recovery and rehabilitation illustrate the basic procedures that the KAPWDDRRMT will employ before, during and after the occurrence of a disaster.

The ultimate goal of this Manual is to protect the lives of the officers and employees of the District, the properties of the District, to ensure the uninterrupted or continuous water supply and services, and the immediate restoration of water supply after a disaster.

The officers and members of the KAPWDDRRMT must:

1) Analyze the condition of the District and its water system or conduct situational Analysis;
2) Identify possible hazards/threats faced by the District;
Follow and strictly act according to the KAPWDDRRMP especially in times of emergencies, calamity/disaster;
3) Provide feedback to the General Manager and the Board of Directors for policy formulation;
4) Request the officers of the KAPWD, LDRRMC, NGOs, GAs, LWUA and Water Districts for any assistance.

To effectively achieve the expected response in times of emergency and calamity, KAPWD Officers and employees and KAPWDDRRMT must take time to understand the contents of this

Manual, practice and internalize the risk reduction measures to eventually make a habit of being prepared before, during and after calamity, be it natural or human-made/induced hazard.

2.4. Designated Emergency Areas

In order to respond in a coordinated fashion to an emergency or disaster, the Conference Room beside the Office of the General Manager is designated as Command Post. It shall be the meeting place of the KAPWDDRRMT and all other personnel as may be called upon by the Team Adviser or the GM and KAPWDDRRMT Team Leader during an emergency situation. The KAPWDDRRMT command post shall be at the control and disposal of the KAPWDDRRMT Adviser and Team Leader.

In disasters where there is a need to evacuate employees and concessionaires outside the KAPWD Building, the assembly area shall be at the open parking are

Chapter III- Natural Hazards

The Philippine Islands are prone to all kinds of natural hazards because of their geographical location and physical environment. The country is strategically located in the path of turbulent and destructive cyclones in the Pacific, and the "Ring of Fire". This situation has adverse effects, not only on the lives and properties of the Filipino people, but also on the economy of the nation, as hazard impacts may result in widespread environmental and property damages.

Natural hazards may cause danger to people, to the District's concessionaires, its system and properties and may lead to disaster if they are not mitigated against and prepared for. Phenomena that are atmospheric, hydrometeorological or oceanographic and geographical in nature may cause the loss of life or injury, property damage, social and economic disruption and/or environmental degradation. Hydrometeorological and geographical hazards can be single, sequential or a combination in origin and effects. The common hazards associated with these are heavy rains, strong winds, and storm surge, floods and landslides/mudslide and mud flow.

Geological hazards are normal and their processes occur as irregular events with direct interaction with the environment. They are capable of causing significant negative impact on human well-being. Their non-rhythmic occurrence makes their predictability difficult. An important characteristic of many geological hazards is their prime land preference – the characteristic of preferentially occupying areas targeted by man for his use. Almost all types of geological hazards occur in the Philippines except hazards associated with glaciers and seasonal snowfall. Hazards arising from volcanic eruptions, earthquakes and other related geotectonic phenomena such as landslide, tsunami and faulting are the most mitigated ones due to the frequency of their occurrence.

The natural hazards are further categorized in this Manual as water supply service crisis. The water supply service crisis may potentially and directly affect the water system and consequently the continuous provision of water supply.

The following are the natural hazards that may be further categorized as water supply service crisis, their effects on the water supply system of the KAPWD and the adopted 4-phase strategy of this Manual.

Natural Hazard	Description	Effects on KAPWD	Prevention Mitigation & Preparedness (what to do before?)	Response (what to do during?)	Recovery & Rehabilitation on (what to do after?)
1. Earthquake	It is the shaking of the ground caused by the sudden slippage of rock massege below or at the surface of the earth. An earthquake may be tectonic or volcanic. A very severe earthquake is usually associated with shocks. Foreshocks are a series of tremors that occur before the main earthquake while aftershocks are weaker earthquake and can cause further damage to weaken buildings.	1. Total or partial destruction of water sources, transmission and distribution lines, chlorinator houses, reservoirs, storage and office building. 2. Interruption of electric power, communication lines and access routes. 3. Deterioration of the water quality at the source due to landslide and other phenomena. 4. Loss or reduction in production from ground water sources.	1. Evaluate the structural soundness of the office building pump houses, water sources, transmission and distribution lines, reservoir and storage. 2. Familiarize officers & employees with the easiest exit or evacuation route to take. 3. Develop evacuation plan and hang/post it in the office building and pump houses. 4. Teach employee how to use the fire extinguishers, first aid kits, alarm and exits. 5. Prepare and maintain survival kits in the office and in pump stations. 6. Request assistance from the BFP fot the conduct of orientation and earthquake drill.	1. Advise employees to stay in a sound building or place. 2. Perform the (Drop, Cover from the floor, cover your head & hold on to solid object) 3. When inside a vehicle, pull at the side of the road and stop. 4. Stay away from power lines, walls or posts & other structures that may fall or collapse. 5. Stay away from buildings with large away from steep escapements which may be affected by landslide.	1. Get out calmly and in orderly manner from the building. 2. Check themselves for cuts and injures. 3. Check the surroundings of the office building & pump houses. 3. Inspect all the power lines, 4. Inspect all the transmission & distribution lines, water sources and reservoirs. 5. Clean the building, pump stations and reservoirs, check if there is any spill of chemical. 6. Report to the Team Leader or to the GM the status of the office building & the whole system. 7. Help to reduce the number of casualties.

2. Volcanic Eruptions	1. It is process wherein volcanic materials such as molten or hot fragmented rocks or gaseous materials are ejected from a volcano. 2. The volume and magnitude of the eruption varies depending on the quantity of gases, the viscosity of the magma and the permeability of the ducts and chimneys of the volcano.	1. Total destruction of the infrastructure in the areas directly affected by pyro lasting flow and surges. 2. Obstruction caused by ash infiltrating surface water intake screens, transmission pipes, filters etc. 3. Deterioration of water quality due to contamination of rivers, streams and springs in lahar deposition areas.	1. Close windows and doors of the office building & pump houses to reduce entry of ash if heavy ash fall is expected to hit the community. 2. Bring tools, machineries, equipment, vehicles & other supplies & materials into closed shelters. 3. Develop evacuation plans and conduct evacuation drills. 4. Avoid low place or areas vulnerable to mud flows, lava etc. 5. The Early Warning Team should spread the information coming from the warning agencies. 6. Always have a copy of hotline number and post it inside the office building & pump house.	1. Stay alert and awake. 2. Follow instructions that go with the warnings. 3. Give priority for evacuation outside the area of ash shower to employees with breathing problems. 4. Cover the nose with wet cloth. 5. Wear goggles and eye glasses. 6. Avoid driving in heavy ash falls unless absolutely required.	1. Clear the office building, pump stations, reservoirs, canals & pathways of ash & other debris. 2. Hose down the accumulated ash in the plant leaves and roofs of the office building & pump stations. 3. Stay away from slide area. 4. Check for injured or trapped persons near the slide areas without entering the slide areas. 5. Direct the rescuers to their locations. 6. Listen to radio or television for latest information. 7. Watch out for flooding which may occur after a landslide or debris flow. 8. Report broken transmission & distribution lines or even power lines and suspected damaged of the office building pump house or reservoir to the Team Leader and to the GM. 9. Stay indoors until local health officials advise that it is safe to stay outside.

					10. Assess the damage of properties and analyze the needs of the KAPWD employees, concessionaires and the whole system.

Landslides	1. It is a massive outward & downwards of movement slop-forming materials. 2.These masses may range in size up to entire mountainside. Their movements may vary in velocity. 3. A landslide is initiated when a section of a hill slope or sloping section of a sea bed is rendered too weak to support its own weight. 4. This is generally triggered by other natural hazards such as prolonged, heavy rainfall or by other sources of water which increase the water content of the slope materials. Landslide as a geological hazard is caused by earthquake or volcanic eruption. building constructions.	1. Change in the physical or chemical characteristics of intake water which will affect treatment. 2. Total or partial destruction of the facilities, particularly intake and transmission components in the path of active landslide. 3. Contamination of the water at surface intakes located in the mountain areas.	1. Maintain the list contact numbers for emergency situations. 2. Prepare evacuation of tools, machineries, equipment and vehicles upon the direction of warning agencies. 3. Continue planting seeding to cover slopes. 4. Build riprap to prevent soil erosion at the p Pump houses and water sources. 5. Reinforce the foundation surrounding the water sources and pump houses. 6. Conduct regular drills on evacuation procedures. 7. Recommend d to proper authorities to enforce land use regulation geared at mitigating landslides. 8. Promote public awareness & involvement on landslide mitigation.	1. Evacuate the tools, equipment, machineries and vehicles if warned of an impending landslide. 2. Advise the technical staff to stay away from the path of the landslide debris or seek refuge behind a sturdy tree or boulder. 3. Get out from the pump stations as soon as possible when rumbling sounds are head from upstream or the trembling of the ground is felt indicating a possible mudflow. 4. Run across the slopes not downward.	Recommend to proper authorities to examine thoroughly the damaged structures and facilities before re-occupying and reutilizing 2. Stay away from landslide area. There may be danger of additional landslide. 3. Check with caution the injured or trapped persons within the landslide area. 4. Direct rescuers to the locations. 5. Listen to radio and television for information and warnings. 6. Seek the advice of a geotechnical expert for evaluating landslide hazard or designing corrective techniques to reduce landslide risk.

4. floods	1.It is the result of excessive rainfall, unusually high sea level, or the rupture of dams and dikes. 2.Increasingly, floods result from human activities causing environmental degradation, and in appropriate land use. 3.On the other hand, some floods are the result of the changes in geomorphology and climatology of water catchment areas. 4.Rainfall intensity and duration are also factors that contributory to flood. 5.Floods can be show or fast rising, but generally develop over a period of hours or days.	1. Damage to pump stations close to flooding water ways. 2. Rupture of exposed pipes across and along rivers and streams. 3. Contamination in water catchment areas. 4. Power cuts, road blockages, and disruption of communications.	1. Find out the occurrence of flood in all the pump stations, reservoirs, water sources and office building. 2. Know the flood warning system of the KAPWD & the City. 3. Research from previous occurrences how fast the flood occurrences occur and how high it rises. 4. Announce to the public to fill their drums with water. 5. Watch out for rapidly rising water & notify Pump operators and employees for evacuation. 6. Have a handy survival kit. 7. Offer services & perform the assigned tasks in the event that the office building & pump stations are designated as evacuation areas. 8. Always be updated and inform technical staff detailed at the field. 9. Protect the KAPWD properties.	1. Always update employees especially at the field 2. Keep updated though radio or news 3. Remind pump operators to utilize gen set if it is possible. 4. Warn the pump operators of snakes and falling debris around the pump stations. 5. All technical must be on duty. 6. Evacuate the office building & pump stations if the situation gets worse.	1. Report busted transmission & distribution lines to the Team leader and to the GM. 2. Ensure that electrical lines of the pumping equipment, are checked properly before switching. 3. Avoid affected areas. 4. Continue listening to radios & other updates. 5. Stay away from the pump stations that are flooded. 6. Construct barriers or ripraps to stop flood from entering water sources & pump stations. 7. Check any damage of the system and repair if any immediately to avoid water interruptions. 8. Continue checking the potability of the water. 9. Check the service areas if all concessionaires have water supply immediately after the flooding.

			10. Check up the gen set, fuels and extra fuels. 11. If possible all gen sets must be operational with a least 2 or more operation. 12. Keep documents and other valuables in a safe deposit box in a safe place.		
5. Extreme Climatic Variabilities (I,e. El Nino, La Nina, Heat Waves, Droughts, etc.	1.Climate Change is the direct impact of global warning. 2.Rising temperatures will cause changes to weather pattern. 3.As global warning occurs, most places will be warmer. 4.This will cause changes in the amount and pattern of rain & snow, in the length of growing seasons, in the frequency and severity of storms and in sea level rises. 5.Droughts are prolonged dry periods during climatic cycles caused by a complex set of hydro meteorological elements that affect the atmosphere.	During drought or El Nino: 1. Loss or reduction of surface & ground water sources and deterioration of water quality. 2. A decline in water level at intake points & in storage facilities. 3. Compulsory rationing of water supply.	1. Climate change issues. 2. Give warnings on the effect of climate change. 3. Update the employees on the Emergency Response Plan of the KAPWD.	1. Plan changes in the daily activities of the KAPWD especially in the field. 2. Announce to the public or to the concessionaires of water rationing. 3. Warn the public to save water and fill their drums 4. Operators must be on duty 24 hours in a shifting mode. 5. Utilize all the water sources including stand by. 6. Continue monitoring water level of all sources. 7. Continue monitoring the water quality	During drought: 1. Assess the affected areas, document for future references. 2. Provide assistance to those who were severely affected. 3. Bring employees or victims of heat at the clinic or hospital.

	1.La Nina is characterized by unusually cold temperatures in the equatorial pacific as compared to El Nino which is characterized by unusually warm ocean temperatures in the Equatorial pacific. 2.The system oscillates between warm (El Nino) to neutral, or cold (La Nina) conditions with an average of 3-4 years.	During La Nina: 1. Rupture of exposed pipes across and along rivers and streams. 2. Contamination in water catchment areas. 3. Power cuts, road blockages, and disruption of communications.	1. Advocate for the recycle/reuse of everyday materials to help conserve resources, lead to less energy & less elements used in manufacturing them while recycling papers lead to less trees being cut down. 2. Save energy by saving electricity through the use of energy efficient lightning and appliance, biking/walking. 3. Advocate the use of renewable energy such as those from hydro-electric dams, wind, power, solar & other radiation & bio fuels. 4. Continue the tree annual tree planting activity of the KAPWD. 5. Conserve water & other natural resources. 6. Be environment friendly.		During La Nina: 1. Assess damage. 2. Repair all busted pipes immediately. 3. Monitor supply of water. 4. Monitor the water quality 5. Continue dissemination on climate change and the role of everyone in mitigating and preventing the occurrence of climate change. 6. Update every now and then the Emergency Response Plan and this Manual.

6 Hurricanes/Severe Storms/Typhoons.	1.Depending on speeds, these natural hazards are called tropical depressions (winds up to 63km/hr accompanied by changes in atmospheric pressure); tropical storms (winds between 64 & 119 km/hr accompanied by intense rainfall or hurricanes (wind speeds of 120km/hr or higher accompanied by heavy rainfall & significant changes in atmospheric pressure)	1. Partial or total damage to facilities, pump stations, command posts & building broken windows, damaged roofs & door, and flooding. 2. Rupture of mains & pipes in exposed areas such as river and streams. 3. Rupture of disjointing of pipes due to landslides and water torrents. 4. Rupture and damage to tanks & reservoirs. 5. Damage to electrical transmission lines & distribution system.	1. Establish & maintain coordination with all the members of the KAPWDDRRM T & the GM. 2. Ensure that the office building, pump station & electrical posts can stand heavy rain & strong winds. 3. Learn about typhoons & other weather disturbance their signs & warnings, effect & how to protect the employees, records, facilities & the whole system. 4. Educate all employees especially those at the field on natural hazards. 5. Participate actively in disaster response-drill or simulation. 6. Update this Manual for the employees & the whole community. 7. Inspect all the properties & systems of the KAPWD to ensure the protection. 8. Secure megaphone as alternative alarm system.	1. Monitor through radio or other information sources the latest update on the typhoon. 2. Coordinate with the KAPWDDRRMT & the GM on possible immediate evacuation of employees, records, tools, machineries & equipment. 3. Advise technical staff to get supply away from immediately structures, trees, electrical posts, power lines or telephone lines if out in the open. 4. Advise the technical staff at the field to watch out fallen debris.	1. Check the office building, reservoirs, transmission & distribution lines & power lines for any damage. 2. Assess the damage and immediately repair or purchase to avoid inconvenience to the concessionaires & employees. 3. Restore water 4. Coordinate with the Brgy. Officials and City Officials if necessary. 5. Remind employees stationed at the field to continually observe safety measure in inspecting the whole system and in putting back the supply of water into normal condition. 6. Continue listening to local radio for update and further warnings. 7. Coordinate with proper authorities for assistance.

			9. Listen to radio & TV for information & updates. 10. Store flashlights & back up batteries to receive warnings. 11. Recommend trimming and removal of dead or rotting trees that could fall and may cause damage or injury. 12. Secure outdoor objects that could be blown away & cause damage.		

Chapter IV- Human Induced Hazards

Human made or induced hazards are threats having elements of human intent, negligence, error and involving a failure of a system. Human induced disasters are a result of inadequately managed human induced hazards such as Technological Hazards, Environmental Hazards and Socio, Economic, Political, Security Hazards.

Technological hazards have little or no warning to precede the incident. These dangers originate from industrial accidents, dangerous procedures, infrastructure failures or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Some of the technological hazards which are discussed in this Manual are structure collapse, fire, vehicular related accidents, chemical spill, electrical black out/massive power failure, food poisoning and system failure.

Environmental hazards are events that pose a threat from the surrounding environment encompassing the broad spectrum of acute and chronic effects of industrial, agricultural and naturally occurring microorganisms, chemicals and radiation in our soil, water, air, food and wastes. Some environmental hazards included in this Manual are red tide and water pollution.

Socio-economic, political, security hazards are caused by criminal and human violence which pose threat to the security of a great number of people, and may be motivated by political or economic reasons. Some of these are robbery, bomb threats/explosion, kidnapping threats, civil disorder, work stoppage, theft, terrorists attack/sabotage, and suicide/death within the premises, misinformation and scandal.

In this Manual these human induced hazards are categorized as Non-Water Supply Service Hazards/Disaster. These will not only affect the provision of water supply but will potentially harm or distort the public image of the Kapatagan Water District and the goodwill that it has established, or put to risk the health and life of its employees and concessionaires.

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Human Induced Disasters	Description	Potential Effects on KAPWD	Prevention Mitigation & Preparedness (what to do before?)	Response (What to do during)	Recovery & Rehabilitation (What to do after?)
1) Technological Hazards a) Structure Collapse	It is often caused by engineering failures such as under design of structural components, by corrosion attack, & by aerodynamic in structures.	1) Injuries 2) Fatalities 3) Psychological Damage 4) Economic Consequences 5) Water Supply interruption 6) Loss of good reputation	1) Conduct inspection of the office building, pump stations & reservoirs. 2) Conduct inspection of the ripraps on Pump Stations. 3) Repair or rehabilitate structures to put them in good condition. 7. Assign personnel who will always check the fire	1) Vacate the building, pump stations or reservoirs immediately 2) Apply first aid and in cases of injuries or fatalities bring the victims to the nearest hospital.	1) Secure the area 2) Assess and evaluate the damaged structures through the help of experts. 3) Report the extent of damages to authorities for proper action. 4) KAPWDDRRMT recommends the abandonment of traction upon recommendation of authorities, if necessary.
2) Fire	Fire is the composed of three elements – heat, fuel & oxygen which when combined will result in a chemical reaction called burning. Fine consumes in the oxygen in the air		1) Revisit the Emergency Response Plan of the KAPWD. 2) Develop building evacuation plans for each of the building & pump station.	1) On the alarm. 2) Advise the BFP 3) Fight the fire with readily available equipment. 4) Seek the nearest exit not blocked by the fire.	1) Conduct inventory of personnel. 2) Seek medical assistance for the injured if any. 3) Coordinate with the BFP & City Engineering Office for the assessment of the damage.

	while increasing the concentration of the deadly carbon monoxide & other toxic gases in the atmosphere. Inhaling carbon monoxide can cause loss of consciousness or dead within minutes.		3) Install fire extinguisher & alarm in the office building & in pump stations. 4) Maintain proper signage for fire exits. 5) Insure the building, pump stations, reservoir & other properties of the KAPWD. 6) Requests the BFP for their assistance I the conduct of fire and earthquake drills. Prone areas of the building.	5) Close window & as you escape from the fire scene to delay the spread of the fire. 6) Get out as safely and quickly as you can. 7) Stay away from the toxic smoke & gases. 8) Do not Panic. 9) Do Not run. 10) Shut of the main Switch. 11) Do not jump out from an upper floor.	4) Conduct inventory equipment, fixtures & facilities. 5) Report Damage/s to authorities. 6) Stay out of fire damage office building & pump station until BFY declared it is safe to re-enter.
3) Vehicular Accident	The KAPWD has several service vehicles to be used by the technical Staff attending maintenance & installation requests, Meter reader to read meters, bill collectors to collect payments & other employees.	1) Negative impact on public image or loss of good reputation. 2) Panic among employees & concessionaires. 3) Possible water interruption.	1) Keep the vehicle in good condition. Always check the breaks, & tires & fuel. 2) Observe traffic rules, dive defensively & practice road courtesy. 3) Never sleep inside the vehicle.	1) Bring the passengers employees out of the vehicle immediately. 2) Apply air & bring to the nearest hospital the injured employees if necessary	1) Assess the damage of the service vehicle. 2) Immediately repair the damage if any to avoid delay in the implementation of request.

	This presents certain risk to the employees' safety. Potential dangers happen especially when board & alight from the service vehicles & even during transporting/driving.	4) Injuries or fatalities if not properly managed. 5) Economic Consequences.	Stay alert & prepare yourself for any emergency.		
4. Chemical Spill	Chemical spillage/leak may pose a threat the environment, human life and death. An individual may be considered exposed to chemicals by inhaling or by the chemical coming in contact with food, water, medicine or clothing thus making it hazardous to people. The best way to avoid chemical. Accident is to read & follow direction for use, storage &	1) Negative impact on public image. 2) Loss of good reputation. 3) Economic consequences. 4) Delay of response time to maintenance & service requests.	1) Take proper precautions when handling chemicals. 2) Educate employees concerned on handling chemicals. 3) Keep safe storage of chemicals. 4) Dispose chemicals properly. 5) Use gloves & masks when handling chemicals.	1) Vacate the affected area. 2) Avoid throwing water or touching the chemicals with bare hands. 3) Inform proper authorities. 4) Cover the nose with wet cloth & transfer casualty to a safer place. 5) For ingested chemical induce vomiting & give milk or starch. 6) Ensure adequate air circulation around the victim.	1) Call paramedic assistance. 2) Bring the victim to the nearest hospital.

	disposal of the product.		6) A stable environment in the office building, pump stations & reservoirs. 7) Provide fire & chemical extinguishers in office & in the pump stations.		
5) Electrical Blackout or power failure	It is a short or long term loss of the electric power covering a very wide area.	1) Caused death or injury if inhaled by employees & humans. 2) Degrade the environment 3) Pollute the atmosphere, groundwater soil wetland & waterways causing danger to human health & even deaths. 4) Loss of good reputations or public image of the BWD.	1) Make sure that there is enough fuel supply in all the pump stations. 2) Check the gen sets if they are in good condition. 3) Announce to the concessionaires of the situation for them to fill their drums of water for future use. 4) Install emergency lightning in dark places & on stairs. 5) Keep flashlights in accessible places.	1) Unplug all electrical appliances. 2) Stay put in one place to avoid accident. 3) Record the operation time of the gen set including fuels consumed. 4) Make sure to shut off the gen set every after 8 hours (2hours rest time).	1) Check electrical outlets & switches. 2) Transfer the pumping equipment from gen set to INEC power immediately. 3) Record everything in log book for future reference.

			6) Prepare ready gas/lamps, candles for emergencies 7) Make sure that there are operators on duty when the gen sets is on.		
6) System failure	This happen when the KAPWD failed to meet the expected outcome of a water source, & thereby could not provide the requirements needed by the concessionaires.	1) Total or partial disruption of water supply. 2) Loss of goodwill with the concessionaires.	1) Conduct feasibility before starting a project. 2) Award the project to a LWUA accredited contractor with vast experience in water system. 3) Supervise the construction of the project following all the rules & regulations contained in the BID documents. 4) Check the water system before the contractor will turn over. 5) Commission the project and request for warranty.	1) Announce to the concessionaires the situation and provide measures to mitigate inconveniences. 2) Repair the system immediately 3) Take all precautionary measures during repair.	1) Assess the damage and report to proper authorities. 2) Record the damage and repair which was done for future reference. 3) Documents all the proceedings for submission to proper authorities. 4) Announce to the public the resumption of the service.

			6) If after commissioning fails, report proper authorities.		
2. Environmental Hazards 1) Water pollution	Water is polluted by substances like sewage, marine litter, oil & chemical spills, fertilizers & pesticides entering the groundwater source of the KAPWD.	1) Total partial disruption of water supply. 2) Loss of goodwill of with the concessionaires.	1) Educate the proper disposal of wastes, human & chemical. 2) Implement the Environment Management Plan of the KAPWD.	1) Clean up the River and surrounding areas of all water sources of the KAPWD. 2) Boil water for consumption. 3) Provide warnings on affected areas. 4) Strictly monitoring the potability of water supply.	1) Seek medical assistance for water borne disease casualty. 2) Continue monitor the potability of water supply.
2) Red tide	Refer to the discoloration of water bodies due to the presence of high level of “bloom” of a group algae called dinoflagellates which are toxic & responsible for paralytic shellfish poisoning.	1) Pollute the water supply of the KAPWD. 2) Cause death or injury when consumed. Employees file leave of absence due to food poisoning which may lead to water supply interruption.	1) Disseminate red tide information, symptoms & progressions. 2) Keep track of & warn regarding media information of fish, shellfish mollusks & crabs.	1) Monitor progression of symptoms & seek medical advice. 2) Avoid or refrain from eating sea foods while danger exists.	1) Seek medical advice.

3) Socio-economic, political, security hazards 1) Robbery	Robbery is the crime of taking or attempting to take something of value by force or by putting the victim in fear, Among the types of robbery is armed robbery involving the use of weapon.	1) Panic among employees & concessionaires within the premises of the KAPWD. 2) Affect cash flow 3) Injury or possibly death, if not properly managed	1) Tighten security measures by installing guard or CCTV at the office. 2) Employ precautionary strategies such as password. 3) Be vigilant about the safety of everyone. 4) Provide alarm connected with the PNP.	1) On the alarm 2) Report to proper authorities. 3) Listen to the advice of the police & other authorities. 4) Be vigilant while the robber are still inside the building.	1) Bring the victim to the hospital for medical check-up/psychological-social counseling. 2) Support the employee in seeking justice. 3) Assess the amount taken by the robber. 4) Convene with proper authorities on what to do & how to solve the problem.
2) Theft	Theft is the taking another person's property without that person's permission or knowledge with the intent to deprive the rightful owner of it.	1) Negative impact on public image (erosion of public trust & confidence on capability to deliver service) 2) Negative impact on employee's morale & performance.	1) Keep safe storage of personal belongings. 2) Install CCTV camera. 3) Record all the properties of the KAPWD 4) If employees are taking care of these properties provide MR.	1) Report to proper authorities. 2) Listen to the advice of the Police & other authorities. 3) Keep the evidence. 4) Document everything.	1) Conduct physical count of the properties of the KAPWD every end of the month. 2) Look the storage room & the pump stations. 3) Provide sanctions.

		3) May affect cash flow. 4) Loss of property of the District.	5) Provide warnings that unauthorized persons are not allowed to enter the premises.		
3) Bomb Threat/Explosions.	A bomb threat is generally defined as a threat, usually verbal or written, to detonate an explosive or incendiary device to cause property damage, death or injuries, whether or not Such a device actually exist. Explosion is a violent release of energy that May cause Injury and/or damage to property.	1) Panic among employees & concessionaires within the premises of the KAPWD. 2) Affect cash flow 3) Injury, or possibly managed to facilities water service interruption	1) Prepare a KAPWD bomb threat emergency plan. 2) Encourage employees to be constantly aware of bomb threats and emergency plan. 3) Provide security or CCTV camera for the protection of employees, property, facilities & materials against unauthorized entry.	1) Threat all bomb threats received as real & report immediately to authorities. 2) Remain calm & courteous. 3) Try to obtain as much information as possible as to the identity of the caller, the characteristic of the caller. 4) Ask the exact Location of the pump 5) Apply delaying tactics 6) Report all details to the authorized persons immediately	1) Request proper authorities to search the building or pump stations, reservoir immediately & thoroughly 2) Strictly implement security measures within the premises. 3) Post incident stress debriefing, if necessary.

4) Terrorists Attack/Sabotage	A situation involving actual or threatened violence, which can be sudden and random in nature. In a workshop	1) Panic among employees and concessionaires within the premises of KAPWD 2) Water service interruption. 3) Injury, or possibly death, if not properly managed.	1) Tighten security measures. 2) Educate employees about the risk.	1) Report to proper authorities. 2) Listen to the advice of the Police Officers.	1) Concentrate on survival. 2) Assess any damage. 3) Repair or rehabilitate immediately. 4) Always be vigilant.
5) Work Stoppage	Mass refusal of employees to work usually taking place as a Result	1) Negative impact on public image (erosion of public's trust & confidence on capability to deliver service) 2) Sales drop 3) Slower productivity	1) Conduct consultative meeting with employees on the issues 2) Provide Operations Manual to officers & employees to know their responsibilities & what the KAPWD expects to do & act. 3) Provide seminars on employee's right & privileges & Values on work. 4) Implement work rotation for all employees to be familiarized with all kinds of jobs.	1) Implement work rotation & multi-tasking. 2) Have a dialogue with the employees who stopped from working. 3) Meet halfway with the demands of the employees concerned without sacrificing service services to concessionaires and the KAPWD as a whole. 4) If no final decision has been made between the two, implement the existing policy on the KAPWD regarding the situation. 5) Report to proper authorities.	1) Assess who joined the work stoppage. 2) Report to proper authorities. 3) Document all the proceedings for future reference.

			5) Discourage employees to join rally or protest that will disrupt the delivery of service.		
6) Misinformation	The act of disseminating false/malicious information among concessionaires, employees or other stakeholders of the KAPWD either by somebody within the agency or a third person with the intent of destroying the public image of the KAPWD	1) Negative impact on public image (erosion of public's trust & confident on capability to deliver service. 2) Loss of good reputation 3) Conflict among employees which may affect productivity.	1) Make the employees & concessionaires aware of the Operations Manual, Freedom of Information Manual & Citizens Charter 2) If there is dispute among employees, investigate and if possible settle within the office. 3) If there is issue between KAPWD & its concessionaire, investigate & settle within the office. 4) Correct as early as possible any misinformation. 5) Stop as soon as possible the spread of misinformation. 6) Report to proper authorities.	1) Report to proper authorities. 2) Investigate the matter. 3) Correct the wrong information. 4) Settle and document every proceeding.	1) After the settlement, public apology should be done by the person who spread the wrong information through any form of media. 2) If the image of the KAPWD was put to bad light, provide sanction to the doer or the person who spread misinformation

7) Scandal	Refers to the behavior or widely publicized allegation or set of allegations that damages (or tries to damage) the reputation of the KAPWD, individual or creed. These may be based on true or false allegations or a mixture of both.	1) Negative impact on public image (erosion of public's trust & confident on capability to deliver service) 2) Negative impact on employee's morale & productivity	1) Make the employees aware of office mechanisms such as Sexual Harassment, Values on Work & Operations Manual. 2) Make the employees aware of the do's & don't as a public official.	1) Report to proper authorities. 2) Listen to the advice of the authorities. 3) Investigate the scandal. 4) Document every proceeding.	1) Require public apology to the doer in any form of media. 2) Provide sanction pursuant to existing laws to the doer assistance to the victim.

Chapter V – Alert Levels

For purpose of the declaration of crisis level, crises shall be categorized whether it is water supply service crisis or non-water supply service crisis.

5.1. Alert Levels- Water Supply Service Crisis

A water service crisis that would necessitate the activation and execution of this KAPWDDRRMP will be based on the severity of damage to its capability to supply its service area, such damage to be measured based on duration of non-delivery of service and the extent of affected area where:

Level 1 – Classified as short duration of crisis situation (less than one day) and with less than 25% of the service area affected, or that which may result to easily-managed and controlled damage or effect.

Level 2 – Classified as short duration of crisis situation (less than one day) and with 25% -69% of the service area affected, or that which may result to significant but manageable damage or effect.

Level 3 – Classified as long duration of crisis situation (more than one day) and with 25%-69% service area affected, or that which may result to significant and more complicated management of the damage or effect.

Level 4 – Classified as long duration of crisis (more than one day) and with 70%-100% of the service area affected, or that which may result to substantial and catastrophic damage or effect to the facilities.

Level 1 Short Duration (less than 1day) Less than 25% of the area affected	**Level 2** Short Duration (less than 1 day) 25%-69% of the service area affected	**Level 3** Long duration (more than 1 day) 25%-69% of the service area affected	**Level 4** Long duration (more than 1 day) 70%-100% of the service area affected

In case of gradual onset of emergencies as in typhoons and slow-rising floods, alert levels may be declared by the KAPWDDRRMT in order to take appropriate measures and address potential effects of the phenomenon in question.

In Level 1 Crisis, information dissemination shall be confined within the affected area, including the barangay covering the area.

In Level 2 Crisis, information dissemination shall be confined within the affected area but the Early Warning Team shall immediately monitor news, blogs and other websites for inaccuracies. The Rescue and Recovery Team shall provide updated information to the Early Warning Team.

In Level 3 Crisis, information dissemination shall be confined within the affected area but the Early Warning Team shall immediately monitor news, blogs and other websites for inaccuracies. It shall also be prepared to set up media station anytime. The Rescue and Evacuation Team shall provide information to Early Warning Team on the progress of service restoration and delivery.

In Level 4 Crisis, information dissemination shall be confined within the affected area but the Early Warning Team shall immediately monitor news, blogs and other websites for inaccuracies. It shall at once develop, in coordination with the Rescue and Recovery Team, the official statement that will be relayed to the officers, employees and to the concessionaires. The Rescue and Recovery Team shall likewise provide updated information to the Early Warning Team on the progress of service restoration and delivery.

5.2. Alert Level of Non-Water Supply Service Crisis

All Non-Water Supply Service crises shall be given the following codes:

a) Code Blue – where the crisis situation is confined to a limited area. It indicates the need to stay put and “lock down” behind closed or locked doors.

b) Code Red – where the crisis situation disrupts all or a large part of the functions of the Kapatagan Water District or endangers the health and safety of its employees or its concessionaires. Code Red indicates the need for evacuation.

Chapter VI- KAPWDDRRMP Framework

The KAPWDDRRMP is aligned with the National NDRRM Plan pursuant to Republic Act 10121 otherwise known as the Philippine Disaster Risk Reduction and Management Act of 2010.

The KAPWDDRRMP serves as a road map on how disaster risk reduction and management will contribute to the attainment of sustainable development, build the adaptive capacities of communities, increase the resilience of vulnerable sectors and optimize mitigation opportunities with the end in view of promoting people's welfare and security towards gender-responsive and rights based sustainable development.

The KAPWDDRRMP just like the NDRRMP is a comprehensive, action-oriented response to international concern about the growing impacts of disasters on individuals, communities and national development.

Framework for Action priorities for action	
1	Make Disaster Risk Reduction a Priority Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation
2	Know the Risks and Take Action Identify, assess, and monitor disaster risks – and enhance early warning
3	Build Understanding and Awareness Use knowledge, innovation, and education to build a culture of safety and resilience at all levels
4	Reduce Risk Reduce the underlying risk factors
5	Be prepared and Ready to Act Strengthen disaster preparedness for effective response at all levels

Chapter 7 – KAPWDDRRMP Proposed Plans and Projects

The KAPWDDRRMP proposed priority plans and projects for the years 2018-2022 were formulated by the BWDDRRMT for each of the 4 pillar to wit:

1. Disaster Prevention and Mitigation

a) Review and integration of KAPWDDRRM/CCA policies in the KAPWD policies, plans and budgets.
b) To draft resolution for earthquake, flood and typhoon trust fund
c) To conduct seminars, workshops on capacity building
d) To conduct trainings on green agriculture
e) To conduct risk analysis and vulnerability assessment
f) To update hazards maps
g) To install warning and forecasting system
h) To update the KAPWDDRRM Manual
i) To designate resettlement sites and evacuation centers
j) To provide flood control measures
k) To promote the KAPWDDRRM Manual to all employees, concessionaires and other agencies.
l) To establish KAPWDDRRM/CCA database systems

2) Disaster Preparedness

a) To establish the guides/protocols for KAPWDDRRMT
b) To conduct regular and periodic drills and simulation exercises
c) To integrate KAPWDDRRM during activity of the officers and employees
d) To conduct capacity building and KAPWDDRRM Skills training
e) To establish of Emergency Response Teams at all sections
f) To install early warning systems, disaster command, and communication centers.
g) To conduct inventory of existing resources.
h) To evaluate the existing systems.
i) To continuously research on KAPWDDRRM/CCA
j) To purchase CCTV cameras
k) To purchase emergency rescue equipment
l) To stockpile commodities
m) To formulate guidelines for the preparation and distribution of relief goods.
n) To conduct blood-letting activity
o) To conduct trainings on food storage, water storage, food preservation, seedling and planting materials.
p) Creation of KAPWDDRRMT office
q) To prepare a contingency plan
r) To strictly implement RA 10121 and CCA RA 9729
s) To draft resolution on pre-emptive evacuation

3. Disaster Response

a) To activate Incident Command System
b) Deployment of Rescue and Evacuation Team
c) Submission of Disaster Report to the KAPWDDRRMT Team Leader and to the General Manager
d) To repack goods
e) Deployment of Assessment and Needs Analysis Team
f) Relief good distribution
g) To conduct of coordination meeting
h) To conduct clearing operations
i) Deployment of medical teams
j) Establishment of first aid tents
k) Establishment of evacuation centers
l) Pre-emptive evacuation
m) Profiling of displaced families
n) Assessment of factors to determine transition to recovery/rehab phase
o) Profiling of damaged properties, equipment, machineries and facilities

4. Disaster Rehabilitation and Recovery

a) Profiling of displaced families
b) Profiling of damaged properties, equipment, machineries and facilities
c) Repair and rehabilitation of damages
d) Improvement/renovation of facilities and procurement of equipment
e) Skills training for early recovery
f) Construction and repair of major infrastructures
g) Construction/repair/rehabilitation of the systems
h) Rehabilitation of flood protection (riprap), canals or drainages
i) Trainings/briefings on stress debriefing

2024 Accomplishment Report

Programs, Activities and Projects (PAP's)	Computation		
	Implementing Section	Expenses	Budget
1.Purchased, Repair and PMS of Genset for Technical Used			
A **generator set** for a local water district's technical team is a **vital investment** that contributes to operational continuity, emergency response, and the resilience of the district's infrastructure. In the context of **Disaster Risk Reduction and Management (DRRM)**, it ensures that the water district can continue providing essential services during crises, mitigate risks related to power outages, and safeguard public health and safety in disaster scenarios. By integrating a generator into their operations, the water district not only prepares for power disruptions but also strengthens its **disaster preparedness**, response, and recovery capabilities. This commitment to resilience and continuity helps reduce vulnerability, maintain service delivery in times of crisis, and protect the community from the worst impacts of natural disasters.	ENGINEERING	1,905,658.13	2,000,000
2.Purchase of Genset for Office Used			
Purchasing a **generator set (genset)** for the **office** itself is an important strategic decision that supports **operation continuity** and **disaster risk reduction management (DRRM)**, especially for organizations that rely on consistent operations to maintain productivity, security, and service delivery. Just like with the water district's technical team, a genset for the office ensures that the office can function smoothly, even in the face of power outages, natural disasters, or unforeseen events. Below, I'll detail the **purpose** and **importance** of having a genset for the office and its relation to **Disaster Risk Reduction and Management (DRRM)**.	ADMIN	49,600	60,000
3.Local Risk Disaster Reduction Management and Bureau of Fire Protection Municipal Level conducted Disaster Orientation			
The **disaster orientation** conducted by the **Municipal Disaster Management** and **Bureau of Fire Protection** is an essential part of an office's **disaster preparedness** and **risk reduction** strategy. It not only provides employees with the knowledge and skills needed to respond effectively during a disaster, but it also promotes a culture of **safety**, **preparedness**, and **resilience** within the organization.	ADMIN	26,345.05	30,000
TOTAL		1,981,603.1	2,090,000

Chapter 8 – KAPWDDRRMP FUNDING

The Agency shall allocate and incorporate funds and resources in their annual work and financial plan and budget. 5% of the total budget appropriation, 30% for the quick response fund and the remaining for the project implementation of the Plans, Programs and Projects.

Prepared by:

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Noted by:

CLAIR GREBERN U. ELUMIR, MBA
General Manager C

KAPWDDRRMP.V1.SEPT2020
KAPWDDRRMP.V2.APRIL2021
KAPWDDRRMP.V3.DEC2022
KAPWDDRRMP.V4.JANDECE2023
KAPWDDRRMP.V5.DECDECE2024