REPUBLIC OF THE PHILIPPINES
CAGAYAN DE ORO CITY WATER DISTRICT
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EMERGENCY RESPONSE PLAN OF THE CAGAYAN DE ORO CITY WATER DISTRICT

Document Control:

VERSION NO.	:	01
Formulation Date	:	23 December 2016
Approved by	:	Board of Directors BOD Resolution No. 168, S-2016
Approval Date	:	27 December 2016
Circulation List	:	BOD – ETAG OGM OAGM – Technical Services All Departments

Ver. 1.0

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Introduction

The purpose of this Emergency Response Plan (ERP) is to provide the Cagayan de Oro City Water District with a standardized response to emergencies and calamities specifically typhoons and the flooding that would result as well as droughts that may be wrought by the El Nino Southern Oscillation phenomenon. This ERP was developed from the experience of COWD during its response and recovery efforts at the time of Tropical Storm Sendong in December 2011 and Typhoon Pablo in December 2012. The Action Plan for Droughts was developed using the experience of COWD during the occurrence of ENSO in 2015-16. This ERP is provided to prevent, minimize, and mitigate injury to personnel and damage to vital facilities during typhoons and droughts.

The objectives of this ERP are the following:

1. To rapidly restore water service after an emergency;
2. To minimize damage to vital facilities during an emergency;
3. To mitigate the impact of disasters on water users;
4. To minimize injuries to employees during an emergency;
5. To minimize negative impact on public health;
6. To provide efficient information dissemination to stakeholders.

II. EMERGENCY PLANNING INFORMATION

Emergencies Experienced by COWD.

The Sendong Experience. Tropical Storm Washi (local name – Sendong), hit Cagayan de Oro in the evening of December 16, 2011 and wrought damage to COWD facilities, submerging in flood waters the Macasandig Booster Pumping Station, four Production Wells in Macasandig, and two Production Wells in Balulang, destroying all equipment in these sites. This is aside from other damage to generators and service connections in the distribution area. The table below shows the flood level experienced in the different sites during TS Washi.

Facility	Distance (meters)	ground elevation (meters)	2011 flood depth (meters)	2012 flood depth (meters)
Macasandig BPS	493	9	3	0
PW1	493	6.75	3	0
PW4	531	8	2.7	0.5
PW7	363	13.25	3.7	1.2
PW9	49	3.25	3.7	1.5
PW19	91	6.75	5.5	0.5
PW24	106	12.5	5.5	2.7
average	303.71	8.50	3.87	0.91
st.dev	214.50	3.48	1.17	0.97

Closely on the heels of TS Sendong, Typhoon Pablo hit Cagayan de Oro in December 2012. This time COWD and Cagayan de Oro City in general, were better prepared. Typhoon Pablo did not bring significant damage to our facilities.

During the tragedy of Sendong, the COWD has been very fortunate to receive aids and assistance of various forms and kinds, including cash of more than PhP53 Million from the Government of the Philippines and about PhP50 Million worth of new production facilities from the People of Japan through the Japan International Cooperation Agency (JICA).

El Nino Phenomenon. Cagayan de Oro City has experienced various droughts in the past during to the El Nino Phenomenon. The most recent occurrence in 2015-2016 brought the most prolonged droughts in Mindanao and particularly in Cagayan de Oro City. Drought conditions were declared by PAGASA in many parts of Mindanao including Misamis Oriental. This fortunately did not bring any disruptions in the production of our wells. However, many water districts in Region 10 did experience severe curtailments in the capacities of their deep well sources.

Partnerships and Coordinations.

City Disaster Office. As soon as an impending emergency threatens Cagayan de Oro City, the local government convenes the City Disaster Risk Reduction and Management Council (CDRRMC) of which COWD is a member. Coordination on the various efforts happens in these meetings, including possible sites of evacuation centers in which COWD water bladders may be installed. These meetings are held at the CDRRMC office at the 2nd Floor, Executive Building, City Hall.

City Fire Department. The City Fire Department (CFD) is under the operational control of the Department of Interior and Local Government (DILG). During emergencies COWD coordinates with this office in the use of their fire trucks to deliver water to the various evacuation centers and other communities. In order to ensure the smooth functioning of this endeavor, fuel costs and other incidental expenses may be shared by both COWD and CFD.

WASH Cluster. COWD as the water utility provider in Cagayan de Oro City is a member of the WASH Cluster. This is operationalized during emergencies by the Regional Office of the Department of Health.

03 october: include the the international organizations coming in during the recovery period; INCLUDE HERE ALSO THE NEIGHBORING WATER DISTRICTS & PAWD

(Note: see Appendix 1 for list of specific contact persons)

Sources of Information:

Weather Updates. The sources of information on weather updates are the websites of the Joint Typhoon Warning Center (https://metoc.ndbc.noaa.gov/JTWC). **- 03 october: to enroll with PAG-ASA for weather advisory even before typhoon entering PAR** This website provides information on developing storms in the Pacific Ocean even before they enter the Philippine Area of Responsibility. Alternatively, information can also be sourced from the Japan Meteorological Agency (www.jma.co.jp).

As soon as tropical storms enter the Philippine Area of Responsibility regular updates will be issued by PAGASA (www.pagasa.dost.gov.ph).

ENSO Updates. El Nino-Southern Oscillation updates are issued by PAGASA (www.pagasa.dost.gov.ph) and also circulated to water districts by the Philippine Association of Water Districts (www.pawd.org.ph).

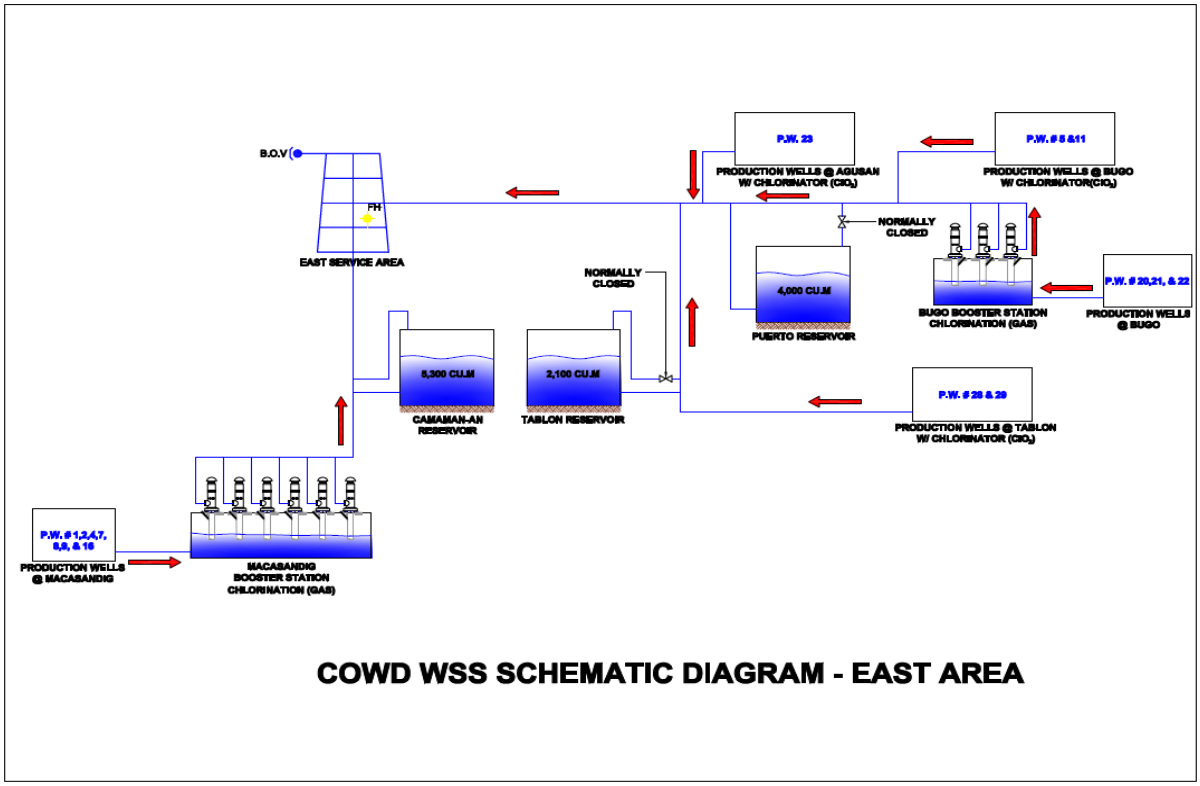
III. Water District Information

On August 1, 1973, the Cagayan de Oro City Water District (COWD) was formed as the first water district in the country. It was issued the conditional certificate of conformance (CCC) No. 001 on January 4, 1974 by the Local Water Utilities Administration (LWUA). COWD was born as a self reliant quasi-public entity with the implementation of the Provincial Water Utilities Act of 1973 or PD 198, which created the water districts nationwide. However, through a Supreme Court decision, all Water Districts in the country have been categorized as government-owned and controlled corporation (GOCC) since March 1992.

COWD started with 3,500 service connections when it took over the management of the then NAWASA or the City Waterworks System in 1973. This represented about 21% of the total City population of 117,895 during that year then. The average water production was 12,200 cubic meters per day distributed to consumers through transmission and distribution lines, 39 kilometers long. As of December 2015, the District currently serves 88,076 service connections with an average water production capacity of 160 million liters per day (MLD). This reflects that in 4 decades, COWD has grown around 24 times in service connections, and 13 times in water production capacity. The potable water COWD serves to the public comes from twenty-seven (27) wells distributed in the six (6) well fields situated at Macasandig, Balulang, Calaanan, Bugo, and Tablon/Agusan. There is one spring source located at Malasag. Since 2007, about 40 MLD of the District's total water production capacity has been supplied by a bulk water contractor. Production facilities include three (3) major booster pumping stations and eight (8) reservoirs while transmission and distribution lines extend up to 565.50 kilometers ranging from 50mm – diameter to 800mm – diameter in size.

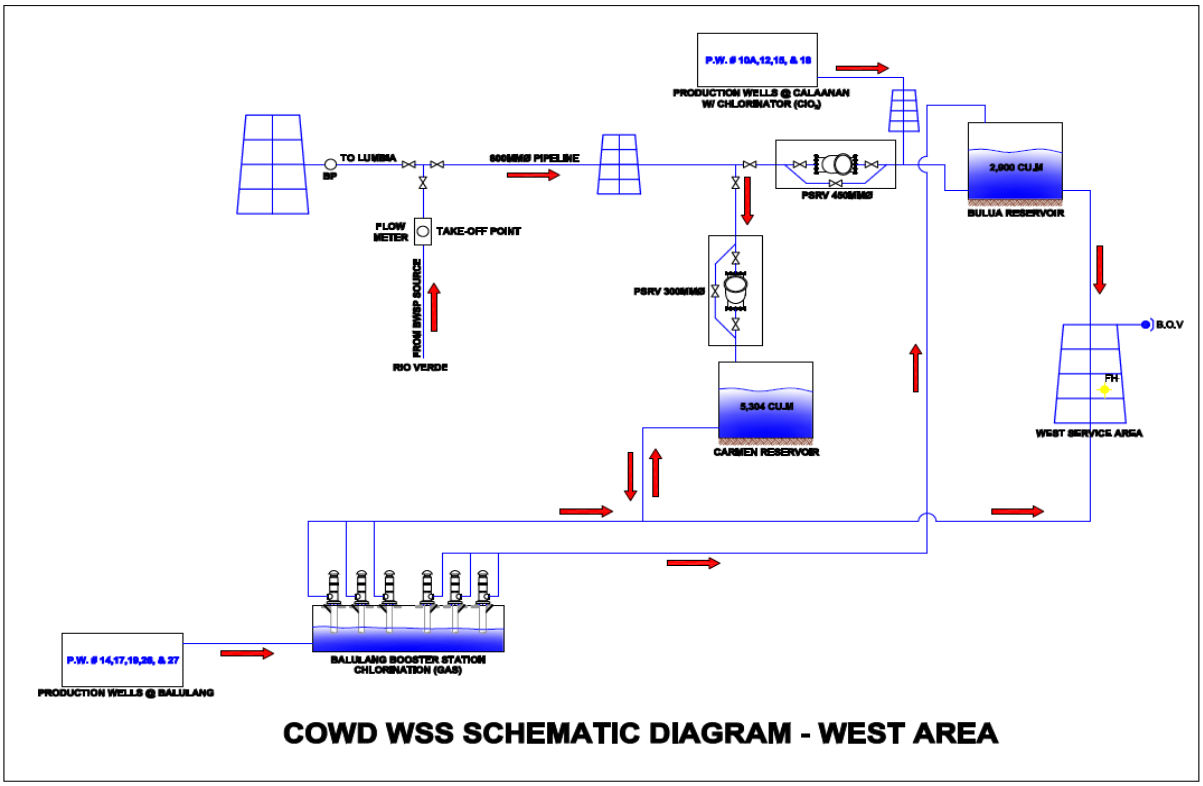
At the moment, COWD has extended services to 6 barangays in Opol, a municipality of Misamis Oriental adjacent to Cagayan de Oro in the west side and to 1 barangay in Tagoloan, the municipality next to the City in the east side. In total, 63 of the 80 barangays of the City have been covered by COWD services. As of December 2015, water service has reached 887,816 representing about 92% of the total estimated population of the District's service area

Map of Cagayan de Oro City Showing Major COWD Facilities



East Area. The eastern part of Cagayan de Oro City (East Area) is served by two Booster Stations and 16 production wells. The Booster Station in Macasandig is fed by 8 production wells in the Macasandig area while the Booster Station in Bugo is fed by three production wells. Two production wells in Bugo, two more in Tablon and one in Agusan, are fed directly to the system. There are three major reservoirs in the East Area, one in Camaman-an, one in Tablon and one in Puerto. Due to technical difficuties experienced by COWD however, these major reservoirs are not operational. One production well in the East Area is no longer in operation (PW#6).

The East Area of COWD is separate from the West Area (described in the next section). Although both areas are connected by a pipeline crossing Ysalina Bridge, the valve thereof is closed such that each area is operated independently.



West Area: The western part of the city (West Area) is being fed by one Booster Station in Balulang, nine production wells and a Bulk Water Supplier supplying COWD 1,667 cu.m/hr (40MLD). The Balulang Booster Station is fed by six production wells. One

production well in Balulang and the three production wells in Calaanan are fed directly to the system. There are two major reservoirs in the West Area, one in Carmen and another one in Bulua. Unlike the reserviors in the East Area, these two are operational. One production well in the West Area is no longer operational (PW #12), and another one (PW 10) was replaced with a new one drilled beside it (PW 10A).

COWD PRODUCTION CAPACITY

(under Normal and Standby Power)

East Area

AREA	PW#	GENSET RATING	Status of Genset/ Remarks	Discharge Capacity (Normal Power Supply) (cmh)	Present Capacity under Genset Operation (cmh)	% Capacity during power failures
Macasandig	1	437.5 KVA	Operational (served by genset provided for Macasandig Booster)	414	414	100%
	2	219 KVA	Operational… Originally from PW#4	233	233	100%
	3A	219 KVA	Operational… Originally from PW#9	57	57	100%
	4	138 KVA	Operational	235	235	100%
	7	138 KVA	Operational	230	230	100%
	8	219 KVA	Operational. Originally from PW#7	192	192	100%
	9	225 KVA	Operational	415	415	100%
	16	175 KVA	Operational	245	245	100%
Total Capacity				**2,022**	**2,022**	**100%**
Bugo	5	75 KVA	Operational but no longer sufficient for new pump-motor rating. To be replaced with generator now being used at Admin Bldg.	132	0	0%
	11	219 KVA	Operational	364	364	100%
	20	500 KVA	Operational (served by genset provided for Bugo Booster)	151	151	100%
	21	156 KVA	Operational	373	373	100%
	22	156 KVA	Operational	259	259	100%
Total Capacity				**1,279**	**1,147**	**90%**
Tablon	23	313 KVA	Operational	414	414	100%
	28	250 KVA	Operational	239	239	100%
	29	250 KVA	Operational	234	234	100%
Total Capacity				**887**	**887**	**100%**
TOTAL CAPACITY EAST SIDE				**4,188**	**4,055**	**97%**

COWD PRODUCTION CAPACITY

(under Normal and Standby Power)

West Area

AREA	PW#	GENSET RATING	Status of Genset/ Remarks	Discharge Capacity (Normal Power Supply) (cmh)	Present Capacity under Genset Operation (during power outage) (cmh)	% Capacity during power failures
Calaanan	10	75 KVA	Operational but under rated already	0	0	0%
	10A	N/A		193	0	0%
	15	132 KVA	Operational	182	182	0%
	18	N/A	No Genset	80	0	0%
Total Capacity				455	182	40%
Balulang	14	219 KVA	Operational	236	236	100%
	17	167 KVA	Operational	155	155	100%
	19	225 KVA	Operational	277	277	100%
	24	75 KVA	Operational	119	119	100%
	25	165 KVA	Operational	276	276	100%
	26	165 KVA	Operational	86	86	100%
	27	132 KVA	Operational	147	147	100%
Total Capacity				1,296	1,296	100%
TOTAL CAPACITY WEST SIDE				1,751	1,478	84%

LIST and STATUS OF COWD GENERATORS

2016

LOCATION	BRAND	KVA	VOLTS	AMPS	REMARKS
Mac BPS BG#1	Cummins	437.5	480	526	Operational but supply cable to Mac BPS for replacement
Mac BPS BG#2	Cummins	437.5	480	526	Operational
Mac BPS BG#3	Volvo	600	480	722	Operational
Mac BPS BG#4	Caterpillar	688	480	827.6	Operational
PW#1	Served by Macasandig BPS Generators				
PW#2	Cummins	219	220	574	Operational. Originally from PW#4
PW#3a	Cummins	219	460	274	Operational. Originally from PW#9
PW#4	Cummins	138	230	346	Operational… From JICA
PW#5	Cummins	75	440	100	Originally from PW#12.. Operational but under rated already. For replacement with genset temporarily installed at Admin Bldg (Daewoo Brand, 156KVA)
PW#7	Cummins	138	440	181	Operational… From JICA
PW#8	Cummins	219	460	274	Operational.. From PW#7
PW#9	Cummins	225	460	282	Operational… From JICA
PW#10a	PERKINS	75	460	94	Operational but under rated already.
PW#11	Cummins	219	440	287	Operational… From PW#12
PW#14	Cummins	219	460	274	Operational
PW#15	PERKINS	132	460	165	Operational
PW#16	Cummins	175	440	230	Operational
PW#17	PERKINS	167	480	200	Operational
PW#18	None				
PW#19	Cummins	225	460	282	Operational… From JICA
PW#20	Served by Bugo BPS Generators				
PW#21	John Deere	156	480	187	Operational
PW#22	John Deere	156	480	187	Operational
PW#23	Caterpillar	313	480	376.5	Operational
PW#24	Cummins	75	460	94	Operational… From JICA
PW#25	DAEWOO	165	460	358	Operational
PW#26	PERKINS	165	440	216	Operational
PW#27	PERKINS	132	460	165	Operational
PW#28	PERKINS	250	480	300	Operational
PW#29	PERKINS	250	480	300	Operational
Balulang BPS BG#1	CATERPILLAR	688	480	827.6	Operational
Balulang BPS BG#2	CATERPILLAR	313	480	376.5	Operational
Bugo BPS BG#1	IVECO	500	460	627	Operational

BOOSTER PUMP DATA

2016

AREA	BP#	Q (cmh)	TDH (m)	STAGES	HP	TYPE	STATUS
Macasandig Booster Station #1	1	371	72	2	150	VTP	Operational
	2	364	46	2	125	VTP	Operational
	3	500	66	4	200	VTP	Operational
	4	364	46	2	100	VTP	Operational
	5	371	72	2	150	VTP	Operational
	6	500	66	4	200	VTP	Operational
Macasandig Booster Station #2	1	371	72	2	150	SUB	Stand-by
	2	371	72	2	150	SUB	Stand-by
	3	371	72	2	150	SUB	Stand-by
	4	371	72	2	150	SUB	Stand-by
	5	371	72	2	150	SUB	Stand-by
Balulang Booster Station	1	360	217	1	200	MODULAR	Newly Installed last June 3, 2016
	2	360	217	1	200	MODULAR	Operational
	3	360	217	1	200	SPLIT-CASE	Operational
	4	338	119	1	100	MODULAR	Operational
	5	338	119	1	100	SPLIT-CASE	Operational
	6	338	119	1	100	MODULAR	Newly Installed last June 3, 2016
Bugo Booster Station	1	378	207	1	125	MODULAR	Newly Installed last June 17, 2016
	2	378	207	1	125	SPLIT-CASE	Operational
	3	378	207	1	125	MODULAR	Operational

LIST and STATUS OF COWD GENERATORS
EAST AREA

LOCATION	BRAND	KVA	Fuel Consumption (liters/hour)	Fuel Storage (liters)	Estimated Operating Hours	Responsible Person
MACASANDIG						**Engr. Richo Suniel (09186085565) and Mr. Nestor Ybanez (09366536556)**
Mac BPS BG#1	Cummins	437.5	45	1338	29.73	
Mac BPS BG#2	Cummins	437.5	45	1338	29.73	
Mac BPS BG#3	Volvo	600	45	2277	50.60	
Mac BPS BG#4	Caterpillar	688	45	1000	22.22	
PW#1	Served by Macasandig BPS Generators					
PW#2	Cummins	219	24	200	8.33	
PW#3a	Cummins	219	24	200	8.33	
PW#4	Cummins	138	18	540	30.00	
PW#7	Cummins	138	18	1543	85.72	
PW#8	Cummins	219	24	1281	53.38	
PW#9	Cummins	225	24	1281	53.38	
PW#16	Cummins	175	20	2558	127.90	
BUGO						
PW#5	Cummins	75	12	200	Operational but under rated already.	
PW#11	Cummins	219	30	200	6.67	Engr. Aladin Ibarra (09058518306)and Mr. Nestor Ybanez **(09366536556)**
PW#20	Served by Bugo BPS Generators					
PW#21	John Deere	156	18	906	50.33	
PW#22	John Deere	156	18	906	50.33	
Bugo BPS BG#1	IVECO	500	42	2587	61.60	
TABLON						
PW#23	Caterpillar	313	36	915	25.42	
PW#28	PERKINS	250	24	378	15.75	
PW#29	PERKINS	250	24	378	15.75	

LIST and STATUS OF COWD GENERATORS
WEST AREA

LOCATION	BRAND	KVA	Fuel Consumption Rate (liters/hour)	Fuel Storage (liters)	Estimated Operating Hours	Responsible Person
CALAANAN						
PW#10a	PERKINS	75	15	200	Operational but under rated already.	Engr. Raymund Roa (09165292409) and Nestor Ybanez (09366536556)
PW#15	PERKINS	132	15	2076	138.40	
PW#18	None					
BALULANG						
PW#14	Cummins	219	24	2076	86.50	
PW#17	PERKINS	167	15	2076	138.40	
PW#19	Cummins	225	30	305	10.17	
PW#24	Cummins	75	12	186	15.50	
PW#25	DAEWOO	165	21	2076	98.86	
PW#26	PERKINS	165	15	398	26.53	
PW#27	PERKINS	132	15	264	17.60	
Balulang BPS BG#1	CATERPILLAR	688	45	2076	46.13	
Balulang BPS BG#2	CATERPILLAR	313	30	852	28.40	

(Note: Please see Appendix 2 to 6 for maps of the location of facilities and generators)

IV. EMERGENCY OPERATIONS

EMERGENCY RESPONSE TEAM

Upon the occurrence on an emergency, the Emergency Response Team shall convene at the Emergency Operations Center which shall be installed at the COWD Board Room, 2nd Floor, Administrative Building, Corrales Avenue. The alternate site of the Emergency Operations Center shall be at one of the local hotels to be identified by the Team Leader.

During the repair and recovery stage, coordination and first contact with all International and National organizations and agencies extending aid shall be done with the office of the General Manager. At any given instant, the General Manager may call at any time for a briefing of the prevailing situation.

The Emergency Response and Recovery Team shall be composed of the following:

Team Leader	- Bienvenido V. Batar, Jr.
Assistant Team Leader/ Recovery Manager	- Carolina B. Lao
Water Distribution	- Elezar J. Linaac
Valves and Appurtenances	- Nieva A. Ladera
Pipelines	- Edgardo D. Tuvilla
Water Connections	- Edna S. Najeal Joel Jamero
Tankers	- Fernando Sarol
Water Bladders	- Moses Echano
Water Sources	- Edward P. Tesoro
Booster Stations	- Alex A. Abangan
Wells and Other Sources	- Raymond R. Roa Aladin Ibarra and Richo Suniel
Electrical Facilities	- Rodolfo Bonsilao, Nestor Ybanez
Water Quality	- Farah Elizabeth B. Gamboa
(Assistant)	- Joy Teresa Neri
Logistics	- Omelfa C. Recto
Supplies and Materials	- Antonio Young
Food, Medicines, etc.	- Sally Borja

Finance	- Adelfa Flores
Petty Cash	- Evelyn O. Vasallo
Liquidation/Documentation	- Virginia Diaz
Communications	- Ladele A. Sagrado
Liaison (Disaster Agencies)	- Antonio Young
Liaison (Government, Aid Agencies)	- Marluna Macmang
Documentation	- Jessilo Abragan
Secretarial	- Armie B. Abragan
Historical	- Jojie May Cabahug

Roles and Responsibilities:

Team Leader. The Team Leader ensures that the Emergency Response Team functions during an emergency. He leads the team's preparation, response and recovery efforts. He is responsible for consolidating all important information that shall be reported to the General Manager at the end of every day during the emergency response and recovery period. He also ensures that each component of the team have the capability and resources to operate well. He shall assist the Recovery Manager in the recovery efforts after the emergency.

Water Distribution. This team will ensure that all distribution facilities are intact during emergencies and will conduct assessment and emergency repairs of breakages that may occur. They will also ensure that when some water sources are lost, water pressure is maintained and will not dissipate in the system, through valve manipulation schemes. This team will also ensure the installation of temporary water connections at fire hydrants and other service connections. While emergency public water access points had alrerady been identified based on past experience, the team is not precluded to identify strategic location for this purpose base on actual conditions. Delivery of water through tankers will also be managed by this team as well as the installation of water bladders in evacuation centers.

Water Sources. This team will ensure the operation of all Booster Stations and Production Wells during emergencies or ensure the proper shutdown of these facilities when necessary. This team will be incharge also in transferring the generators in designated areas as stipulated in the ERP. Likewise, this team shall also conduct an immediate survey and assessment of any damage that may occur and submit a report to the Team Leader.

Water Quality. This team shall ensure the maintenance of water quality in the distribution system. They shall also establish the protocol for the treatment of water delivered through COWD tankers**.** This team is also incharge of monitoring water quality in bladders and other storage facilities in evacuation centers. Water quality test result shall be furnished to the Team Leader.

Logistics. Logistics shall ensure the availability and/or procurement of needed supplies and materials for Water Distribution and Water Sources. When the appropriate government office declares a State of Calamity in Misamis Oriental, this team shall ensure that the needed documentation for passing a COWD Board Resolution authorizing emergency procurement is in order. This team shall also be responsible for provisions that the EOC may require as well as those in the evacuation center for COWD employees.

Finance. This team shall set-up a procedure for payment of supplies and materials that will be procured through emergency purchase as may be authorized by the COWD Board. They shall ensure the availability of a petty cash fund that will allow for purchasing emergency supplies. They shall also ensure that financial documents that may be needed for liquidation and auditing are in order.

Communications. This team shall prepare and release media updates and information to the public in general on a regular basis. When necessary this team shall spearhead the conduct of media conferences. In addition to providing information to the public, they shall also provide updates to the COWD employees On the status of the emergency and recovery efforts.

Liaison. A liaison officer for coordinating with the City Disaster Office or the National Disaster Office as the case may be shall be assigned. This shall be a different person than the one who will be assigned to liaison with the City Government and Aid Agencies. The Liaison Officers shall report to the Team Leader updates or information gathered from these external entities.

Documentation. The documentation team shall provide secretarial assistance to the Emergency Response Team and the Team Leader. Historical documentation of all events as well as measures that were developed by the Emergency Response Team shall also be the responsibility of this team. Specifically, this team will be incharge in consolidating the damage assessment reports from the different field teams as well as the drafting of comprehensive report from preparation stage up to the completion of the recovery works. Status updates, whenever possible and necessary, like submission to regulatory agencies, donors and local and national agencies, shall also be the responsibility of this team.

V. EMERGENCY ACTION PLANS

V.I Emergency Action Plan (Storms)

The hazard that will be introduced by storms in Cagayan de Oro City in general and COWD in particular, is extreme flooding. The emergency action plan for storms therefore covers **contingencied** against extreme flooding. In the Sendong experience of COWD, flooding affected the entire Macasandig Booster Station, four ~~six~~ Production Wells in Macasandig and two in Balulang. Laboratory equipment, turbine pumps, controllers, transformers and generators were damaged. Recently the turbine pumps in Production Wells were replaced with submersible pumps, making these resilient against flooding.

Sources of Information. The initial source of information that will be accessed is the Joint Typhoon Warning Center. By October 1, the **Emergency Operations Officer – is this the team leader?** shall monitor information issued by the JTWC weekly. As soon as JTWC issues information on a weather disturbance in the area that will affect the Philippines, monitoring shall be done on a daily basis. When JTWC issues information of a storm heading towards the Philippines, EAP/S Level 1 shall be activated. At this stage monitoring for information

will include the PAGASA, and as soon as PAGASA issues information that the storm has entered the Philippine Area of Responsibility (PAR), EAP/S Level 2 shall be activated.

Upon PAGASA's issuance of Storm Signal #1 over Misamis Oriental, EAP/S Level 3 shall be activated.

Upon PAGASA's issuance of Storm Signal #2 over Misamis Oriental, EAP/S Level 4 shall be activated.

Upon PAGASA's issuance of Storm Signal #3 or stronger over Misamis Oriental, EAP/S Level 5 shall be activated.

ERP PROTOCOL:

CONDITION	EAP LEVEL ACTIVATED
JTWC issues information of a storm heading towards the Philippines	LEVEL 1
PAG-ASA issues information that the storm enters PAR	LEVEL 2
PAG-ASA issues Storm Signal #1	LEVEL 3
PAG-ASA issues Storm Signal #2	LEVEL 4
PAG-ASA issues Storm Signal #3	LEVEL 5

EAP/S Levels.

At the start of the typhoon season, around the first week of October, the Production Department (specifically, Antonio B. Young and Nestor Ybanez) shall check the availability and operability of all generators.

Upon activation of level 1, the EOC shall operate for 16 hours (2 shifts). Vehicles with assigned drivers should be readied for gathering the members of the ERT who are on call.

Level 1:

Activity	Location	Required Logistics	Responsible Team	Responsible Person
Check/Seal all openings of Production Wells	Macasandig and Balulang	Vehicle, sealing materials	Water Sources	Raymond R. Roa Richo Suniel
Check/Seal all utility access of sumps in Booster Stations	Macasandig and Balulang Booster Stations	Vehicle, sealing materials	Water Sources	Antonio B. Young
Ensure availability of Motor Rewinding Shops, Generator and Transformer Technicians	Hi-Tek Engineering, Gusa, CDO (motors, generators); Flux Engineering, Kauswagan, CDO (generators); CESTCO, A. Velez St. (transformers	Vehicle	Water Sources	Rodolfo Bonsilao Nestor Ybanez
Ensure availability and operability of vehicles to be used during emergency response.	COWD Motorpool	None	Water Distribution	Fernando Sarol

Level 2: (PAR)

Activity	Location	Required Logistics	Responsible Team	Responsible Person
All water bladders must be checked for readiness and usability	Stored at Property Office (to be checked visually for holes and patched if any are found)	Patching materials (Repair Kit)	Water Distribution	Moses Echano
Check availability of fuel for generators (Note; Fuel storage for PW#4, 7, 9, 19 &24 shall be in drums) - 03 october: Fuel storage in low-lying PWs shall be in drums	Generators in all stations.	Vehicle, Diesel Fuel	Water Sources	Antonio B. Young Raymond R. Roa
Check availability and functionality of Communication Equipment and the Provisions and Supplies for Employees Evacuation Center	Admin Office	As listed in Appendix 11.3	Logistics	Teresita Fabria

Level 3: Signal 1

Activity	Location	Required Logistics	Responsible Team	Responsible Person
Convene Emergency Response Team	2nd Floor, Admin Building, Corrales Avenue		ERP Team Leader	Bienvenido Batar, Jr.
Activate Emergency Operation Center (16 hour operation)	2nd Floor, Admin Building, Corrales Avenue	As listed in Appendix 11.3	ERP Team Leader	Bienvenido Batar, Jr.
Generating sets in low-lying areas shall be evacuated to higher ground including fuel stored in drums	Prospective sites: generators from PW 4, 7 and 9 – PW#16 and PW#2; from PW 19 and 24 – Balulang Booster Station	Vehicle, SG	Water Sources	Antonio B. Young Raymond R. Roa Richo Suniel Nestor Ybanez
Ensure communication lines between COWD facilities and EOC	Macasandig and Balulang Booster Stations AND EOC	Handheld Radio, Cellphone (Part of Appendix 11.3	Logistics	Omelfa C. Recto
Check availability of water containers	Property Division	Vehicle	Logistics	Teresita Fabria
Check availability	Laboratory,	As listed in	Water Source	Farah Gamboa

Activity	Location	Required Logistics	Responsible Team	Responsible Person
of equipment and chemicals for water quality test	Production Dept.	Appendix 11.4		Joy Neri
Negotiate (make bookings) with hotels/Dormitories to house/secure families of the members of ERT and COWD Officials	CDO area	Vehicle	Logistics	Omelfa Recto

Level 4: Signal 2

Activity	Location	Required Logistics	Responsible Team	Responsible Person
Install water bladders at designated evacuation centers (coordinate with City Disaster Office)	The three water bladders available will be installed in the following areas: a. South City Central School, Macasandig b. West City Central	Bladders, Vehicles, Radio, manpower	Water Distribution	Elezar Linaac Moses Echano

Activity	Location	Required Logistics	Responsible Team	Responsible Person
	School, Carmen City Central School, A. Velez St.			
All laboratory equipment shall be transferred	Elevated platform at the Macasandig Booster Station and at Admin Office (portable ones to be used for quality monitoring)	Manpower (JO personnel)	Water Sources Water Quality	Edward Tesoro Antonio Young Farah E.B. Gamboa
Fittings of at least **(10 units)** for tapping installations at fire hydrants shall be prepared	These will be installed along Vamenta Blvd., Carmen and in Gusa/Cugman area. (see Appendix 7)	Fitting materials, Vehicle (Part of Appendix 11.4)	Water Distribution	Elezar Linaac Edna S. Najeal
Service connection materials for public faucet installations shall be prepared	These will be located near Production Wells in Macasandig and Balulang which will still be operational. (see Appendix 8)	Service Connection Materials as listed in Appendix 11.4, Vehicles	Water Distribution	~~Edna S. Najeal~~ Joel Jamero

Activity	Location	Required Logistics	Responsible Team	Responsible Person
Prepare for 24-hour operations at the EOC	Prepare conference room at the 2nd floor, Admin Building, Corrales Ave.	As listed in Appendix 11.3, Vehicles	ERP Team Leader Logistics	Bienvenido Batar, Jr. Omelfa C. Recto
Prepare all COWD tankers for deployment (check fuel and fill with water)	To be deployed from Motorpool, Shop Compound, Kauswagan	Drivers, Diesel Fuel	Water Distribution	Fernando Sarol
Hauling of fuel from Macasandig Booster Generators (Note: Maintain fuel for at least 1 day operation)	To be transferred to PW#16	Vehicle, drums, portable Fuel Pump, Manpower	Water Source	A. Young R. Suniel
Activate Communication Plan – Provide advisory to store water	Admin Office	Vehicle	Communications	Ladele A. Sagrado
Set-up evacuation center for COWD personnel	Shop compound, Kauswagan	As listed in Appendix 11.2	Logistics	Omelfa Recto Teresita Fabria

Level 5: Signal 3

Activity	Location	Requuired Logistics	Responsible Team	Responsible Person
Activate 24 hour operations at the EOC	2nd Floor, Admin Building, Corrales Avenue	As listed in Annex 11.3	ERP Team Leader	Bienvenido Batar, Jr.
Containers for drinking water must be filled and readied in all COWD buildings	20-liter Sealed Containers with Faucets. Admin Bldg.: 20 pcs Shop : 20 pcs Booster Stations (3): 10 pcs each	50 pcs Containers with faucets	Logistics	Adelfa Flores Teresita Fabria
Emergency provisions (emergency lights, water and food) shall be prepared at the EOC	2nd Floor Admin Bldg., Corrales Ave.	As listed in Annex 11.3	Logistics	Omelfa C. Recto Adelfa Flores
Secure families of personnel assigned at the EOC	Nearby hotels, lodging houses, or shop compound.	Emergency Funds	ER Team Logistics	ER Team Members in coordination with Omelfa C. Recto
Advice SG assigned at PW4,7 &9 to	Macasandig and Balulang Booster	None	Logistics	Teresita Fabria

report to Macasandig Booster and SG assigned at PW#19 and 24 to Balulang Booster				
Post Trauma Debriefing of those affected by calamity	Admin Office		Logistics	Omelfa Recto

V.II Emergency Action Plan (Floods)

Flooding can occur in Cagayan de Oro City and affect COWD during heavy monsoon rains. However the extent of flooding is nowhere near as severe as flooding caused by storms. The normal flood plain of Cagayan River will affect only two wells of COWD. These are PW 7 and 9 in Macasandig. During heavy rains, power outages are also common.

Source of Information. The main source of information for flooding is the PAGASA. Upon issuance by PAGASA of a Weather Bulletin with a warning against flooding in Cagayan de Oro City. The following Emergency Action Plan shall be activated.

EAP/F

Activity	Location	Required Logistics	Responsible Team	Responsible Person
Check/Seal all openings of Production Wells	PWs in Macasandig, specially PW 7 and 9	Sealing Materials, Vehicle	Water Source	Richo Suniel
Generating sets shall be evacuated to higher ground	Prospective site: generating sets from PW 7 & 9 to PW#16	Vehicle	Water Source	Alex A. Abangan Richo Suniel Nestor Ybanez

	~~Macasandig Barangay Hall~~			
Ensure availability of fuel for generating sets.	Generating sets in all stations	Vehicle, Diesel Fuel	Water Source	Raymond R. Roa Richo Suniel

V.III Emergency Action Plan (Drought)

Source of Information. The main source of information for drought is the PAGASA. This happens at the onset of an El Nino phenomenon.

Upon PAGASA's issuance of an advisory , EAP/D Level 1 shall be activated.

EAP/D Levels:

Level 1:

Activity	Procedure	Required logistics	Responsible Team	Responsible Person
Commence extensive water conservation campaign - voluntary	Tri-media campaign (print, radio, TV)	Vehicle	Communications	Ladele A. Sagrado
Monitor weekly the Pumping Water Level in all wells.	Measure the PWLs in all wells and submit report weekly.	Vehicle	Water Sources	Rodolfo Bonsilao

*Upon **occurrence of three successive ten (10) centimeter drops, or a cumulative drop of 30 centimeters in the PWL** of one Production Well in at least one well field, activate EAP/D Level 2.*

Level 2:

Activity	Procedure	Required logistics	Responsible Team	Responsible Person
Throttle the valve in the Production Well to lower discharge	Throttle valves and reduce discharge by increments of 10% per week until the PWL increases back to original level or at least becomes stable	Vehicle, PWL measuring device	Water Sources	Edward Tesoro Antonio Young
Continue monitoring the PWL in all wells	Measure the PWLs in all wells and submit report weekly.	Vehicle, PWL measuring device	Water Sources	Rodolfo Bonsilao

Upon occurrence of three successive ten (10) centimeter drops, or a cumulative drop of 30 centimeters in the PWL of two or more Production Wells in at least one well field,activate EAP/D Level 3.

Level 3:

Activity	Procedure	Required Logistic	Responsible Team	Responsible Person
Throttle the valves in Production Wells	Throttle valves and reduce	Vehicle	Water Source	Edward Tesoro Alex A. Abangan

affected to lower discharge	discharge by increments of 10% per week until the PWL increases back to original level or at least becomes stable			
Lower pump of all wells in the well field affected	Lower pumps to cover the maximum cumulative drop in PWL in the well field	Suction Columns, Connectors	Water Source	Edward Tesoro Alex A. Young
Implement water rationing through water delivery by tankers	Hire additional water tankers such that there will be at least 5 tankers per affected well field	Water Tankers	Logistics	Omelfa C. Recto Adelfa Flores
Monitor more closely water quality in the system	Increase the sampling from the 100 identified sampling points to two (2) per month.	Vehicles	Water Source	Farah E.B. Gamboa
Issue advisories on water quality	Issue advisory that COWD is continuing to		Communication	Ladele A. Sagrado

	implement stringent water quality measures and no problems are anticipated. However water delivered by tankers, while treated at the source, may have been contaminated through handling, this then must be boiled before drinking or use in cooking.			

VI. RESPONSE AND RECOVERY.

During the emergency response, the Assistant Team Leader shall be the Recovery Manager. He/she will have the responsibility and authority to coordinate recovery planning; authorize recovery activities; protect the health and safety of workers and the public; and initiate, change, or recommend protective actions.

Recovery Manager		- Carolina B. Lao
Damage Assessment Team:		
	Team Leader	- Edward P. Tesoro
	Members:	
	Water Distribution	- Edgardo D. Tuvilla
		Nieva A. Ladera
		Edna Najeal
		Joel jamero
	Water Sources	- Alex A. Abangan
		Raymond R. Roa
		Richo Suniel
		Aladin Ibarra
		Nestor Ybanez
		Rodolfo Bonsilao
	Water Quality	- Farah Elizabeth B. Gamboa
		Joy Teresa Neri
Logistics		- Omelfa C. Recto
		Antonio Young
Documentation		- Jisselo Abragan
		Armie C. Abragan
		Joji May Cabahug
Communications		- Ladele A. Sagrado
Media Spokesperson		- Ladele A. Sagrado

Water Distribution: (use standard form in Appendix 9.1 and 9.2)

1. Assess and survey all transmission and distribution facilities for any damage that may have been sustained and recommend plans to repair or rehabilitate these facilities. Conduct emergency repairs or perform temporary corrective measures on damaged transmission and distribution lines to restore normal delivery of water.
2. Assess all reservoirs for any structural damage and recommend corrective or retrofitting measures.
3. Assess all valves and appurtances for any damage and recommend a plan for repair or rehabilitation.
4. **Assessment of actual number of evacuees per evacuation centers and size of water storage facilities for volume requirement purposes.**
5. **Secure damaged service connections and facilitate meter retrieval in affected areas and recording of necessary data using the standard form .**
6. **Facilitate installation of emergency water supply access points at designated hydrants and PWs and the delivery of water at evacuation centers.**

Water Sources: (use standard form in Appendix 9.2 and 9.3)

1. Assess all Production Wells for any damage or contamination sustained. Conduct emergency repair to restore operation. Implement protocol to ensure water quality prior to recommissioning of water sources (Appendix 10). Submit damage report and recommend a plan to rehabilitate these wells to become flood resilient.
2. Assess all Booster Stations for any damage or contamination sustained and conduct emergency repair to restore operation. Implement protocol to ensure water quality prior to recommissioning of water sources (Appendix 10). Submit damage report and recommend a plan to rehabilitate these stations to become flood resilient.
3. Assess all Electrical Facilities for any damage and conduct emergency repair – install temporary power supply. Submit damage report and recommend a plan for replacement of rehabilitation.

4. Assess any structural damages on pumping facilities (perimeter fence, pump house) and submit damage report. Request for full security protection, if necessary, to all vulnerable and damaged pumping facilities.

Water Quality:

1. Assess damage to water treatment facilities, laboratory equipments and submit damage report.
2. Assess water quality in the distribution system and recommend measures to ensure water safety.
3. Implement protocol for ensuring water safety in all water sources prior to recommissioning. (see Appendix 10)
4. Monitor water quality from water truck deliveries and from water storage facilities deployed in all evacuation centers -03 october: add storage facilities deployed at evacuation centers
5. Conduct massive flushing, chlorine residual monitoring and bacteriological test after the resumption of water supply.

Logistics:

1. Ensure the availability of materials, supplies, and equipment that may be needed for the recovery efforts.
2. Ensure that documentation of all procurement is complete whether done through emergency or regular procedures.
3. Conduct assessment and post-trauma debrifieng to all employees affected by the calamity.

Documentation:

1. Consolidate all damage assessment, repair and recovery reports from all field teams.
2. Ensure that proper documentation of recovery efforts, including all financial transactions are complete.

Ensure that historical documentation is complete to enable the updating and appropriate revision of the ERP.

Communication:

1. Implement the communication plan (see Appendix 12) for disseminating recovery information and updates to the public.
2. Conduct media briefings in order to ensure that correct information will reach the public.

The Recovery Manager shall manage all these efforts and make decisions on each issue. He/She shall be responsible for leading the efforts of the Emergency Response Team towards recovery and returning the system to normal operations,

VII. UPDATE AND TRAINING

UPDATE

The ERP shall be updated annually at least a month before the typhoon season In Mindanao which lasts from around October to December every year. Furthermore it shall also be updated upon the occurrence of any of the following:

1. Changes in the assignments of personnel assigned in the Emergency Response Team;
2. Addition of new personnel in the ERT;
3. Changes in the Vulnerability Assessment of COWD;
4. After the conduct of ERP Exercise/Simulation;
5. Changes in contact information of internal and external resources;
6. After significant water system modifications or improvements.

TRAINING

All personnel who may be assigned to respond to emergencies, specially the members of the Emergency Response Team, shall undergo ERP Training and Refreshers annually. Such trainings and refreshers shall be conducted at least three months before the typhoon season in Mindanao. This annual training and refresher shall include an ERP Exercise/Simulation which should allow COWD to update the ERP prior to the typhoon season. Furthermore trainings shall be conducted when:

1. Revisions in procedures are introduced;
2. New personnel are hired;
3. New equipment are introduced;
4. Changes in responsibilities are made.

Course Content of the Training

1. The main features of the Emergency Response Plan
2. The Emergency Action Plans in the ERP
3. The Partner Organizations and the different collaborations with each
4. Sources of Information necessary for the activation of the Emergency Action Plans
5. Simulating the accessing of information
6. Simulating the activation Emergency Operations Center
7. Simulating Damage Assessment and Recovery
8. Assessment of remaining gaps
9. Action planning to address the identified gaps.

APPENDICES.

1. List of Contact Persons in Partner Organizations
2. Map Showing Facilities/Generators in Macasandig Area
3. Map Showing Facilities/Generators in Bugo Area
4. Map Showing Facilities/Generators in Tablon/Agusan Area
5. Map Showing Facilities/Generators in Balulang Area
6. Map Showing Facilities/Generators in Calaanan Area
7. List of Possible Sites for Public Faucets in Hydrants
8. List of Possible PWs in Macasandig and Balulang where Public Faucets can be Installed
9. Standards Damage Assessment Forms
    - 9.1 Standard Form for Transmission/Distribution Lines
    - 9.2 Standard Form for Reservoirs
    - 9.3 Standard Form for Booster Stations
    - 9.4 Standard Form for Production Wells
10. Water Safety Protocol Prior to Recommissioning Water Sources
11. Logistical Requirements
    - 11.1 Procurement Protocol under Emergency Cases
    - 11.2 Provisions and Supplies for Employees Evacuation Center
    - 11.3 Provisions and Supplies at EOC
    - 11.4 Supplies and Materials to Procure Prior to an Emergency
12. Communication Plan

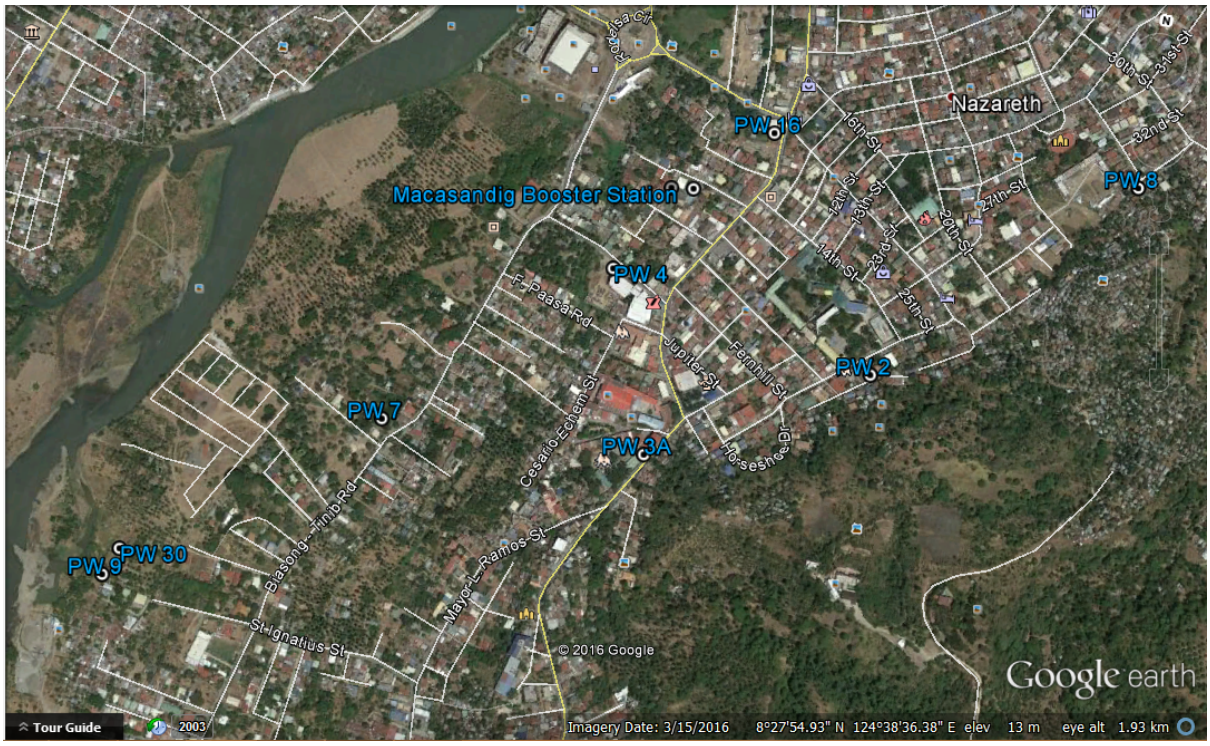
APPENDIX 1

LIST OF CONTACT PERSONS IN PARTNER AGENCIES

OFFICE	ADDRESS	CONTACT PERSON	CONTACT NUMBER
CITY HEALTH	Archbishop Hayes Street, Cagayan de Oro City	**DR. FE. C. BONGCAS** City Health Officer	(088)857-3183/857-3184/857-3185
CITY ENGINEER	City Engineers Office, Kauswagan, Cagayan de Oro City	**ENGR. ROLANDO M. PACURIBOT, CE, ME** CEED MANAGER ACTING CITY ENGINEER/CITY EQPT. DEPOT MANAGER	
CITY BUILDING OFFICIAL	Ground Floor, Legislative Building, City Hall, Cagayan de Oro City	**ARCH. MARIA CONCEPCION A. ALCANTARA** OIC-City Building Official	(088) 857-2687 | 858-2823
CDRRMO	Capistrano-Hayes St., City Hall Compound Cagayan de Oro City	**MR. ALLAN A. PORCADILLA** CDRRMO OIC	8574144 09175592456-GLOBE 09282588824-SMART
DPWH REGIONAL	Engineer's Hill, Bulua, Cagayan de Oro City	**EVELYN T. BARROSO, PhD, CESO II** Regional Director	(088) 853-2002 (088) 858-4323
DPWH DISTRICT 1	**Cagayan de Oro City 1st District Engineering Office** RES Compound (Regional Office) Cagayan de Oro City	**ENGR. YOLANDA T. EGAM** District Engineer	(088) 858-9876
DPWH DISTRICT 2	**Cagayan de Oro City 2nd District Engineering Office** Puntod, Cagayan de Oro City	**ENGR. ANASTACIO G. MARUNDAN** District Engineer	(088) 856-8774
DOH (WASH CLUSTER)	J. Seriña St., Carmen Department of Health Cagayan de Oro City	**ENGR. MARIA CARMELA ROA** Cluster Head, EOH	858 7123
CITY FIRE DEPT.	Captain Vicente Roa St., Cagayan de Oro City	**CHIEF INSPECTOR ROMMEL E. VILLAFUERTE** DISTRICT Fire Marshal	725827

03 OCTOBER: INCLUDE PAWD, MAWD, NORMIN

APPENDIX 2
Map Showing Facilities/Generators in Macasandig Area

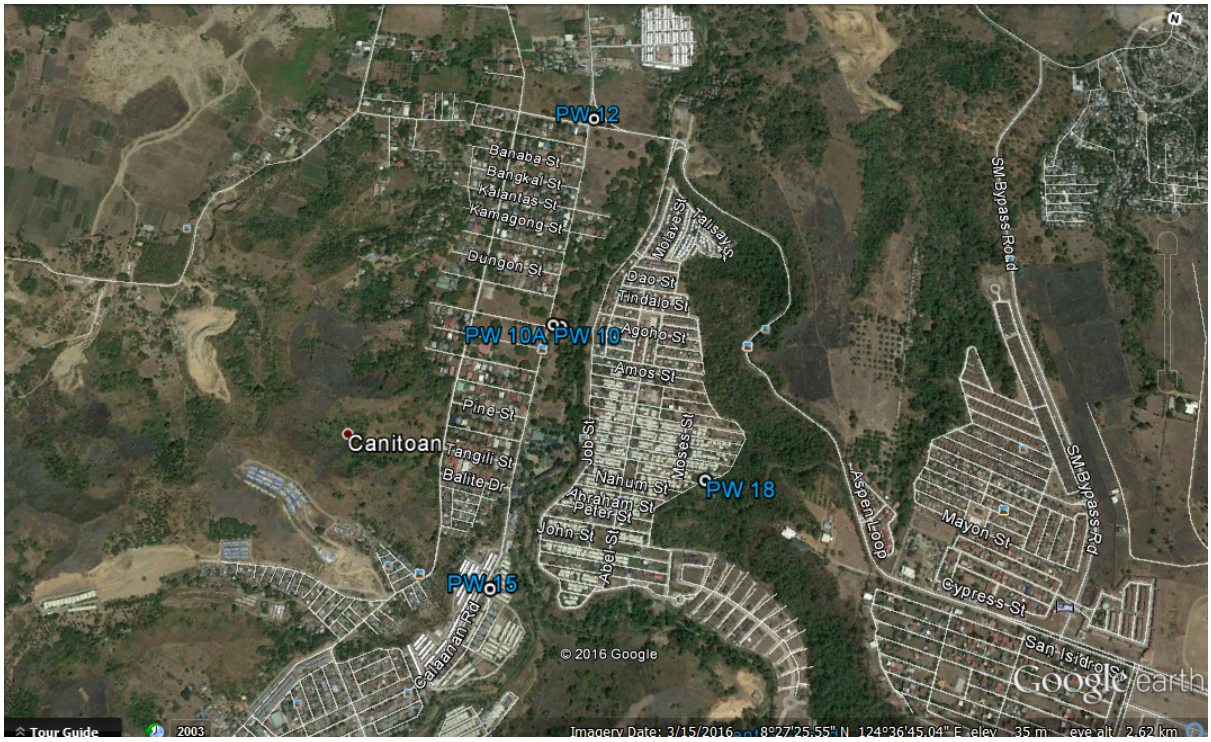


APPENDIX 3
Map Showing Facilities/Generators in Bugo Area

APPENDIX 4
Map Showing Facilities/Generators in Tablon/Agusan Area

APPENDIX 5
Map Showing Facilities/Generators in Balulang Area

APPENDIX 6
Map Showing Facilities/Generators in Calaanan Area



APPENDIX 7

List of Possible Sites for Public Faucets in Fire Hydrants

- 03 OCTOBER: ADD STRATEGIC LOCATIONS TO BE IDENTIFIED BY THE WATER DISTRIBUTION TEAM

1. Jollibee - Vamenta Blvd., Carmen
2. Golden Heritage – Vamenta Blvd., Carmen
3. Elipe Park – Vamenta Blvd., Carmen
4. KSY Convenience Store – Vamenta Blvd., Carmen
5. Julie's Bakeshop – Vamenta Blvd., Carmen
6. Barangay Plaza, Lapasan
7. CUMC Hospital – Gusa
8. Capistrano Complex - Gusa
9. COWD Kauswagan Sub-Office
10. Mindanao University of Science & Technology - Lapasan

APPENDIX 8

List of Possible PWs in Macasandig and Balulang where Public Faucets can be Installed

Macasandig:

1. PW #2
2. PW #3A
3. PW #16

Balulang:

1. PW #17
2. PW #19
3. PW #25
4. PW #27

APPENDIX 9 STANDARD DAMAGE ASSESSMENT FORMS

Damage Assessment Guide :

1 - No damage, can be operated immediately
2 - Slight damage, can be repaired in less than 1 week
3 - Partial damage, can be repaired within 1-3 weeks
4 - Severe damage, can be repaired within 4 weeks
5 - Total damage, needs replacement

Note : Pictures of the Facilities must be provided as part of the damage assessment report.

APPENDIX 9.1
Standard Form for Transmission/Distribution Lines

CAGAYAN DE ORO CITY WATER DISTRICT

DAMAGE ASSESSMENT FOR TRANSMISSION/DISTRIBUTION LINES

Line ID No. _____
Location _____
Date _____

Description	Make / Type	Brand	Size	Damage Assesment					Remarks
				1	2	3	4	5	
Transmission / Distribution Line									
Pipe									
Coupling/Jointing									
Valves									
Isolation Valves									
PRV									
PSV									
Air Release									
Blow-off									
Hydrant									
Pipe Bridge									
Pier									
Truss									
Anchors									
Pipe Straps									
Other Facilities									

Remarks _____
_____
_____

APPENDIX 9.2
Standard Form for Reservoirs

CAGAYAN DE ORO CITY WATER DISTRICT

DAMAGE ASSESSMENT FOR RESERVOIRS

Reservoir ID No. _____

Location _____

Date _____

Description	Make / Type	Brand	Size	Damage Assesment					Remarks
				1	2	3	4	5	
Reservoir Top Slab									
N-E Quarter									
N-W Quarter									
S-W Quarter									
S-E Quarter									
Reservoir Wall									
N-E Quarter									
N-W Quarter									
S-W Quarter									
S-E Quarter									
Inlet									
Pipe									
Valve									
Outlet									
Pipe									
Valve									

Remarks _____

APPENDIX 9.3
Standards Form for Booster Stations

CAGAYAN DE ORO CITY WATER DISTRICT

DAMAGE ASSESSMENT FOR BOOSTER PUMPING STATIONS

Booster Station No. _____

Location _____

Date _____

Description	Make / Type	Brand	Size	Damage Assesment					Remarks
				1	2	3	4	5	
Booster Pumps and Motors									
BP #1									
BP #2									
BP #3									
BP #4									
BP #5									
Power Facilities									
Power Line #1									
Power Line #2									
Tranformer #1									
Tranformer #2									
Generator #1									
Generator #2									
Civil Works Facilities									
Sump									
Building									
Shed House									
Fence									
Gate									
Other Facilities									

Remarks _____

APPENDIX 9.4 – 03 OCTOBER: INCLUDE PRIORITIZATION OF THE RESPONSE NEEDED
Standard Form for Production Wells

CAGAYAN DE ORO CITY WATER DISTRICT

DAMAGE ASSESSMENT FOR PRODUCTION WELLS

Production Well No. _____
Location _____
Date _____

Description	Make / Type	Brand	Size	Damage Assesment					Remarks
				1	2	3	4	5	
Production Facilities									
Pump									
Motor									
Controller									
Discharge Line									
Flowmeter									
Valves									
Tripod									
Support Facilities									
Power Line									
Transformer									
Generator									
Chlorinator									
Civil Works Facilities									
Fence									
Gate									
Shed House									
Other Facilities									

Remarks _____
_____
_____

APPENDIX 10

Protocol to Ensure Water Safety Prior to Recommissioning Water Sources

1. When the pumping facilities of a water source (i.e. production well) are already available after a flooding incident, the well must be pumped in order to release any contaminated water that may have entered it.
2. When the water coming out of the well is no longer turbid, pumping must be continued for at least 1 hour more.
3. A water sample shall be taken from the well. This sample shall undergo Bacteriological Testing using the Membrane Filtration Technique (MFT).
4. After the sample is taken, the well shall be disinfected with chlorine according to the proper dosage as computed by the Quality Control Officer (Farah E.B. Gamboa).
5. Twenty-four hours after, the well will be pumped to remove the chlorine in the well. The water from the well should have zero chlorine residual already before pumping is stopped.
6. If the Bacteriological Testing would shows a negative result (for both Total Coliform and E.Coli.) the well may be recommissioned.
7. If the Bacteriological Testing would show a positive result (for either Total Coliform or E.Coli.), steps 3 to 5 shall be repeated until a negative result is attained.

Note : Disinfection of chlorine must always be done after a water sample is taken to take advantage of the 24-hour window required by MFT. With this, the sampling-disinfection-testing process will be a continuous cycle until the well passes standards.

APPENDIX 11
Logistical Requirements

The following sections deal with logistical requirements and protocol that must be done prior to an emergency.

APPENDIX 11.1

Procurement Protocol under Emergency Cases

1. Secure approval from the COWD Board of Director to procure supplies and materials through Negotiated Procurement under Emergency Cases pursuant to Section 53.2 of RA 9184.
2. A Purchase Requisition (PR) is prepared for the items needed by the ERP Team Leader. Such PR goes through normal approval process.
3. Issue a Request for Quotation (RFQ) to suppliers for the items needed as reflected in the approved PR (requesting from one supplier only is acceptable).
4. The lowest quotation submitted may undergo further negotiation.
5. Award is made to the bidder submitting the lowest quotation.

Note: Advertisement, issuance of bid documents, formal bidding process is not required anymore.

APPENDIX 11.2

Provisions and Supplies for Employees Evacuation Center

(Estimated Capacity of Shop Compund = 10 Families)

- 03 oct: review site proposal

1. 10 units Portalets (portable toilets)
2. 10 units Outdoor Stoves with 2 tanks of LPG each
3. 10 pcs Tents with a capacity of 5-7 people each
4. 20 pcs Ordinary Plywood
5. 10 pcs 200-liter Drums (water container)
6. 10 sacks Rice (the families are expected to provide their other provisions)
7. 10 units First Aid Kits
8. 50 pcs Sleeping Bags

03 OCTOBER: (1) for review as to supplies and quantities; (2) at what point will these be made available? orwill these be taken from existing available supplies?; use of calamity fund ; who is responsible for acquiring; for disposal

APPENDIX 11.3
Provisions and Supplies at the EOC

1. 6 units Portable Rechargeable Lamps (20 watts)
2. 2 units Portable Generators (500 watts)
3. 2 units First Aid Kits
4. 1 unit Cellular Phone with SIM Card and 2 pcs P500 Prepaid Cards
5. 2 units Radio
6. 1pc Gas Stove with 2 tanks LPG
7. 1 pc Microwave Oven
8. 100 sets Ready-to-eat Meals (microwaveable)
9. 5 pcs 20-liter Water Containers (filled with water)
10. 20 sets Plastic Utensils
11. 1 set Cooking Utensils
12. 1 pc Airpot
13. Office Supplies

03 october: (1) for validation during general assembly at launch of this ERP
(2) include communication equipment (battery packs, radio units, cellphones, cell cards, etc
(3) identify when will these be made available (before level 1, at level 1, etc)
(4) where shall these be pulled out if not to be purchased AND WHO IS IN-CHARGE for acquisition and return or dispose or stock

APPENDIX 11.4

Supplies and Materials to Procure Prior to an Emergency

Materials for 10 units 50mm Water Lines for an Estimated 10 Excavation Centers

1. 20 rolls 50 mm PolyEthylene Pipes
2. (other materials are available from inventory and must be set aside prior to an emergency)
    a. Service Saddles - 10 pcs
    b. 50 mm GI Short Pipes - 10 sets
    c. 50 mm x 50 mm GI Tees - 10 pcs
    d. 50 mm x 25 mm GI Tees - 100 pcs
    e. 50 mm GI Elbows - 10 pcs
    f. 25 mm x 20 mm GI Bushing - 100 pcs
    g. 20 mm Brass Faucets - 100 pcs

Other Supplies and Materials

1. 2 units Portable Generators 3000 watts each
2. 4 sets Portable Lighting System 500 watts each
3. 10,000 pcs Water Disinfection Tablets
4. 1,000 pcs Chlorine Residual Test Kits

Supply of the Following shall also be Firmed Up with Suppliers

1. Fuel (adequate supply for generators) – Shell Service Station in Kauswagan: 03 0ctober: negotiate with fuel supplier
2. Gas Chlorine – Mabuhay Vinyl Corp., Iligan City

03 october: for discussion during general assembly for the launch of ERP; when to have these available; who will be responsible for acquisition, return or dispose; use of calamity fund; additional bladders; contact tankers from neighboring water districtst

APPENDIX 12
Communication Plan

Communication Type	Participants / Audience	Frequency	Responsible Person
Team Meetings	Emergency Response Team Members	Daily	Team Leader – Bienvenido Batar, Jr.
COWD Management Briefings	GM, Board, Management	Weekly or as needed	Team Leader – Bienvenido Batar, Jr.
Tri-media Updates (through interviews)	Media	As needed	Spokesperson - Ladele A. Sagrado
Customer Updates using written advisories	(advisories posted in Barangay Halls and COWD premises)	As needed	Ladele A. Sagrado
Press Conferences	Media, Stakeholders	Weekly or as needed	Bienvenido Batar, Jr. Ladele A. Sagrado