

BUTUAN CITY WATER DISTRICT

# ANNUAL

# REPORT

# 2020



## MISSION

Butuan City Water District, a service-oriented entity, endeavors to preserve the environment, deliver quality service and satisfy its customers.

## VISION

A leader in the water and sanitation industry advancing integrated water resource management.



## CORE VALUES

- C - Commitment
- L - Leadership
- I - Integrity
- E - Excellence
- N - Novelty (Innovation)
- T - Teamwork
- S - Safety

# Butuan City Water District 2020 Annual Report

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# The Corporate Governance Structure

OFFICE OF THE  
Board of  
**Directors**  
and Policy Making Body



**ATTY. ROLDAN L. TORRALBA**  
*Chairperson  
Professional Sector  
Committee on Legal Bids and Awards*



**DIR. LEAH A. MENDOZA, CPA**  
*Vice Chairman  
Women Sector  
Committee on Finance and  
Internal Control*



**DIR. CRISPIN L. YOUNG**  
*Treasurer  
Education Sector  
Committee on Personnel and Property*



**DIR. JUANITO A. LAO, Ph.D.**  
*Secretary  
Business Sector  
Committee on Environment  
and Community Development/  
Relations*

## PERFORMANCE

# HIGHLIGHTS

The data and information used in this annual journal are actually the performance of each unit/department covering a calendar year of operation. Basically, Butuan City Water District is a water utility covering its franchise service area. Just like any typical water utility its operation involves but not limited to water sourcing, transmission and distribution and most importantly the water treatment and inherently the water quality monitoring to ensure water fits for human consumption. In order to continue providing services, BCWD maintains its water facilities, appurtenances and services as part of the whole water supply operation.

The whole operation would somehow be unsuccessful without the stint of each support unit/department to the requirements needed in the operation and so this report would account their contributory performance. This would also account for the major on-going developmental projects status of BCWD and the expected impact to the whole system. On top of everything, performance indicators would tell tales about how BCWD fared in 2020 in terms of performance.

# UTILITY PROFILE

| BUTUAN CITY WATER DISTRICT             |                                       |
|----------------------------------------|---------------------------------------|
| Address                                | Jose Rosales Avenue, Butuan City 8600 |
| Classification                         | Category "A"- Very Large              |
| Water Sources                          | Surface and Ground Water              |
| Water Treatment Method                 | Chlorination                          |
| Pumping Stations                       | 5                                     |
| Tanks & Reservoir                      | 6                                     |
| <b>Total Service Connections:</b>      | 53,275                                |
| Residential                            | 49,666                                |
| Commercial                             | 3,043                                 |
| Government                             | 469                                   |
| Bulk                                   | 97                                    |
| <b>Service Area:</b>                   | 86 Barangays                          |
| Served Barangays                       | 56 Barangays                          |
| Unserve Barangays                      | 30 Barangays                          |
| <b>Population Serve</b>                | 268,080                               |
| <b>Personnel</b>                       | 217                                   |
| Permanent                              | 159                                   |
| Job Order                              | 58                                    |
| <b>Service Connection per Employee</b> | 335                                   |

## Tariff and Fees

| CLASSIFICATION  | SIZE   | SERVICE<br>MIN. CHARGE<br>0-10 cu.m. | COMMODITY CHARGE |                |                |                |                  |
|-----------------|--------|--------------------------------------|------------------|----------------|----------------|----------------|------------------|
|                 |        |                                      | 11-20<br>cu.m.   | 21-30<br>cu.m. | 31-40<br>cu.m. | 41-50<br>cu.m. | Over 50<br>cu.m. |
| Residential     | 1/2"   | 208.65                               | 38.35            | 41.75          | 49.00          | 57.55          | 67.55            |
| Government      | 3/4"   | 333.80                               | 38.35            | 41.75          | 49.00          | 57.55          | 67.55            |
|                 | 1"     | 667.65                               | 38.35            | 41.75          | 49.00          | 57.55          | 67.55            |
|                 | 1-1/2" | 1,669.20                             | 38.35            | 41.75          | 49.00          | 57.55          | 67.55            |
|                 | 2"     | 4,173.00                             | 38.35            | 41.75          | 49.00          | 57.55          |                  |
| Commercial 1    | 1/2"   | 365.10                               | 67.10            | 73.05          | 85.75          |                |                  |
|                 | 3/4"   | 584.15                               | 67.10            | 73.05          | 85.75          |                |                  |
|                 | 1"     | 1,168.35                             | 67.10            | 73.05          | 85.75          |                |                  |
|                 | 1-1/2" | 2,921.10                             | 67.10            | 73.05          | 85.75          |                |                  |
|                 | 2"     | 7,302.75                             | 67.10            | 73.05          | 85.75          |                |                  |
| Commercial 2    | 1/2"   | 417.30                               | 76.70            | 83.45          | 98.00          | 115.10         | 135.10           |
| Industrial      | 3/4"   | 667.60                               | 76.70            | 83.45          | 98.00          | 115.10         | 135.10           |
|                 | 1"     | 1,335.30                             | 76.70            | 83.45          | 98.00          | 115.10         | 135.10           |
|                 | 1-1/2" | 3,338.40                             | 76.70            | 83.45          | 98.00          | 115.10         | 135.10           |
|                 | 2"     | 8,346.00                             | 76.70            | 83.45          | 98.00          | 115.10         | 135.10           |
| Bulk/ Wholesale | 1/2"   | 625.95                               | 115.05           | 125.20         | 147.00         | 172.65         | 202.65           |
|                 | 3/4"   | 1,001.40                             | 115.05           | 125.20         | 147.00         | 172.65         | 202.65           |
|                 | 1"     | 2,002.95                             | 115.05           | 125.20         | 147.00         | 172.65         | 202.65           |
|                 | 1-1/2" | 5,007.60                             | 115.05           | 125.20         | 147.00         | 172.65         | 202.65           |
|                 | 2"     | 12,519.00                            | 115.05           | 125.20         | 147.00         | 172.65         | 202.65           |

# WATER SOURCES

## SURFACE WATER (*Taguibo River*) through PPP Bulk Water



## GROUND WATER



Pump Station No.01



Pump Station No.03



Pump Station No.14



Pump Station No.15



Pump Station No.15

## STORAGE FACILITIES TANKS AND RESERVOIRS



Resettlement Elevated Reservoir



Bliss Elevated Reservoir





Km 6, Libertad Ground Reservoir and  
Booster Station



Emily Ground Reservoir and  
Booster Station

# ACTIVE SERVICE CONNECTIONS

## BILLED CONNECTION PER BARANGAY BY CLASSIFICATION December 2020

| No.             | Barangay       | CLASSIFICATION    |            |              |              |           | Total Billed Connections |
|-----------------|----------------|-------------------|------------|--------------|--------------|-----------|--------------------------|
|                 |                | RURAL Residential | Government | Commercial 1 | Commercial 2 | Bulksale  |                          |
| 1               | AGUSAN PEQUEÑO | 889               | 6          | 0            | 0            | 0         | 895                      |
| 2               | AMBAGO         | 2,975             | 20         | 20           | 25           | 4         | 3,044                    |
| 3               | AMPAYON        | 2,027             | 31         | 61           | 74           | 3         | 2,196                    |
| 4               | ANTICALA       | 20                | 3          | 0            | 0            | 0         | 23                       |
| 5               | ANTONGALON     | 226               | 3          | 1            | 1            | 1         | 232                      |
| 6               | BAAN KM.3      | 2,899             | 16         | 51           | 50           | 7         | 3,023                    |
| 7               | BABAG          | 223               | 1          | 0            | 0            | 0         | 224                      |
| 8               | BANCASI        | 498               | 12         | 0            | 5            | 2         | 517                      |
| 9               | BANZA          | 535               | 4          | 1            | 1            | 0         | 541                      |
| 10              | BASAG          | 193               | 0          | 0            | 0            | 0         | 193                      |
| 11              | BIT-OS         | 151               | 1          | 1            | 0            | 0         | 153                      |
| 12              | BOBON          | 27                | 0          | 0            | 0            | 0         | 27                       |
| 13              | BONBON         | 424               | 2          | 0            | 4            | 1         | 431                      |
| 14              | CABCABON       | 229               | 3          | 0            | 0            | 1         | 233                      |
| 15              | CAMAYAHAN      | 2                 | 0          | 0            | 0            | 0         | 2                        |
| 16              | DOONGAN        | 3,085             | 20         | 34           | 25           | 1         | 3,165                    |
| 17              | DUMALAGAN      | 144               | 4          | 0            | 1            | 0         | 149                      |
| 18              | LEMON          | 211               | 3          | 0            | 0            | 0         | 214                      |
| 19              | LIBERTAD       | 5,695             | 46         | 116          | 171          | 19        | 6,047                    |
| 20              | LUMBOCAN       | 700               | 4          | 0            | 0            | 0         | 704                      |
| 21              | MAHAY          | 438               | 2          | 1            | 0            | 1         | 442                      |
| 22              | MASAO          | 296               | 3          | 1            | 2            | 0         | 302                      |
| 23              | MAUG           | 296               | 2          | 0            | 1            | 0         | 299                      |
| 24              | PAGATPATAN     | 873               | 7          | 1            | 0            | 0         | 881                      |
| 25              | PANGABUGAN     | 440               | 1          | 0            | 1            | 0         | 442                      |
| 26              | PIANING        | 189               | 0          | 0            | 0            | 0         | 189                      |
| 27              | PIGDAULAN      | 199               | 3          | 0            | 1            | 1         | 204                      |
| 28              | PINAMANCULAN   | 337               | 5          | 0            | 0            | 0         | 342                      |
| 29              | SAN VICENTE    | 3,439             | 11         | 30           | 30           | 8         | 3,518                    |
| 30              | TAGUIBO        | 980               | 11         | 0            | 10           | 0         | 1,001                    |
| 31              | TALIGAMAN      | 276               | 3          | 0            | 1            | 1         | 281                      |
| 32              | TINIWISAN      | 577               | 8          | 1            | 7            | 0         | 593                      |
| 33              | VILLA KANANGA  | 4,007             | 9          | 30           | 88           | 11        | 4,145                    |
| <b>SUBTOTAL</b> |                | <b>33,500</b>     | <b>244</b> | <b>349</b>   | <b>498</b>   | <b>61</b> | <b>34,652</b>            |

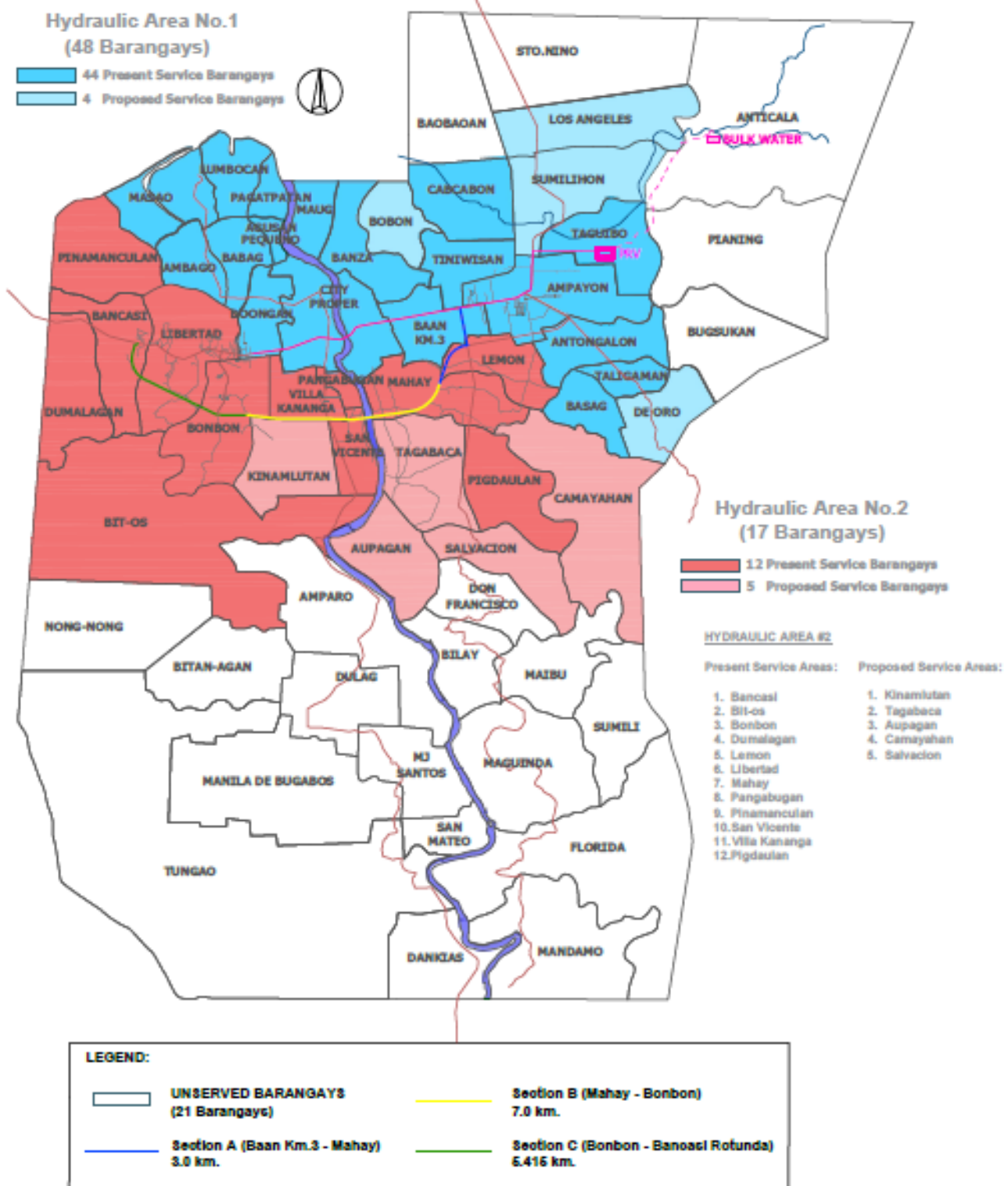
| No.             | Barangay            | CLASSIFICATION |            |              |              |           | Total Billed Connections |
|-----------------|---------------------|----------------|------------|--------------|--------------|-----------|--------------------------|
|                 |                     | Residential    | Government | Commercial 1 | Commercial 2 | Bulksale  |                          |
| 1               | AGAO                | 115            | 1          | 7            | 5            | 0         | 128                      |
| 2               | BAAN RIVERSIDE      | 947            | 4          | 3            | 0            | 0         | 954                      |
| 3               | BADING              | 1,023          | 2          | 4            | 3            | 0         | 1,032                    |
| 4               | BAYANIHAN           | 1,163          | 14         | 43           | 117          | 0         | 1,337                    |
| 5               | BUHANGIN            | 699            | 3          | 0            | 3            | 0         | 705                      |
| 6               | DAGOHOY             | 398            | 22         | 57           | 87           | 2         | 566                      |
| 7               | DATU SILONGAN       | 147            | 1          | 56           | 37           | 0         | 241                      |
| 8               | DIEGO SILANG        | 234            | 30         | 40           | 50           | 1         | 355                      |
| 9               | GOLDEN RIBBON       | 787            | 1          | 11           | 18           | 2         | 819                      |
| 10              | HOLY REDEEMER       | 1,221          | 5          | 52           | 66           | 8         | 1,352                    |
| 11              | HUMABON             | 45             | 4          | 42           | 43           | 0         | 134                      |
| 12              | IMADEJAS            | 484            | 71         | 34           | 96           | 1         | 686                      |
| 13              | J.P. RIZAL          | 1,128          | 6          | 31           | 42           | 7         | 1,214                    |
| 14              | LAPU-LAPU           | 243            | 1          | 34           | 37           | 0         | 315                      |
| 15              | LEON KILAT          | 46             | 6          | 73           | 52           | 0         | 177                      |
| 16              | LIMAHA              | 1,523          | 10         | 147          | 139          | 6         | 1,825                    |
| 17              | MAHOGANY            | 1,024          | 5          | 2            | 4            | 0         | 1,035                    |
| 18              | MAON                | 879            | 5          | 0            | 1            | 1         | 886                      |
| 19              | NEW SOCIETY VILLAGE | 195            | 3          | 26           | 24           | 0         | 248                      |
| 20              | OBRERO              | 1,178          | 9          | 18           | 17           | 1         | 1,223                    |
| 21              | ONG YIU             | 713            | 3          | 15           | 10           | 0         | 741                      |
| 22              | PORT POYOHON        | 718            | 2          | 46           | 68           | 4         | 838                      |
| 23              | RAJAH SOLIMAN       | 98             | 2          | 14           | 12           | 0         | 126                      |
| 24              | SAN IGNACIO         | 348            | 2          | 64           | 37           | 3         | 454                      |
| 25              | SIKATUNA            | 6              | 2          | 65           | 36           | 0         | 109                      |
| 26              | TANDANG SORA        | 784            | 9          | 102          | 104          | 0         | 999                      |
| 27              | URDUJA              | 20             | 2          | 50           | 52           | 0         | 124                      |
| <b>SUBTOTAL</b> |                     | <b>16,166</b>  | <b>225</b> | <b>1,036</b> | <b>1,160</b> | <b>36</b> | <b>18,623</b>            |
| <b>60</b>       | <b>GRAND TOTAL</b>  | <b>49,666</b>  | <b>469</b> | <b>1,385</b> | <b>1,658</b> | <b>97</b> | <b>53,275</b>            |

## POPULATION SERVE

With a total population of 372,910 in the 2020 census, Butuan has an average density of 460 persons per km<sup>2</sup>, higher than the regional average density of 130 persons per km<sup>2</sup>. It has 86 urban and rural barangays of which 56 barangays are connected to the water district pipelines about 53,275 households with water service connections or 266,375 based on the average size of Filipino family with 5 members – roughly 71% of the total population.

# PRESENTLY SERVED & PROPOSED SERVICE BARANGAYS

Proposed Tapping Point: Baan Km.3

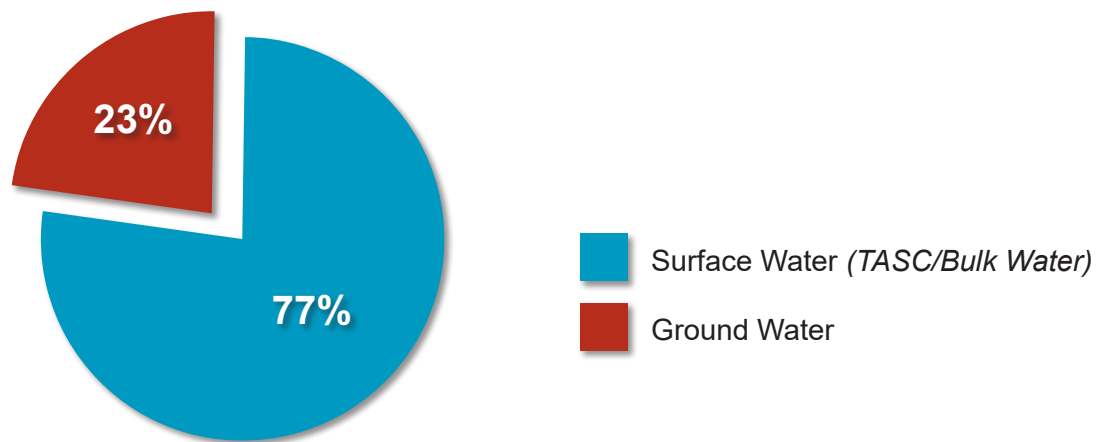


# OPERATION

## WATER PRODUCTION

The total volume of water supplied in the system for CY 2020 is 17,575,232 m<sup>3</sup>. This consists of 13,508,066 m<sup>3</sup> surface water (*TASC/Bulk Water*) and 4,067,166 m<sup>3</sup> groundwater (*Pumping Facilities*).

### 2020 Percentage of Share of Ground Water and Surface Water Source



*A total of 17,575,232 cubic meters was produced from the combined water sources of BCWD. The production from the surface water through the Bulk Water is 13,508,066 cubic meters and the production from the groundwater source through the pumping facilities is 4,067,232 cubic meters*

## GROUND WATER

There are four (4) active Pumping Stations / deep wells (*PS/DW*) all located at the eastern side of the Agusan River. The bulk water serving as the major supply source with the deep wells/pumping stations as back up contingently operating on peak hours and when the pressure of the bulk water is way below the ideal eventually pumping stations are engage to beef up pipeline pressure.

The water derived from the operation of the Pumping Stations is directly feed into the transmission/distribution lines after determination that it passes the turbidity requirement of maximum of 5 NTU.

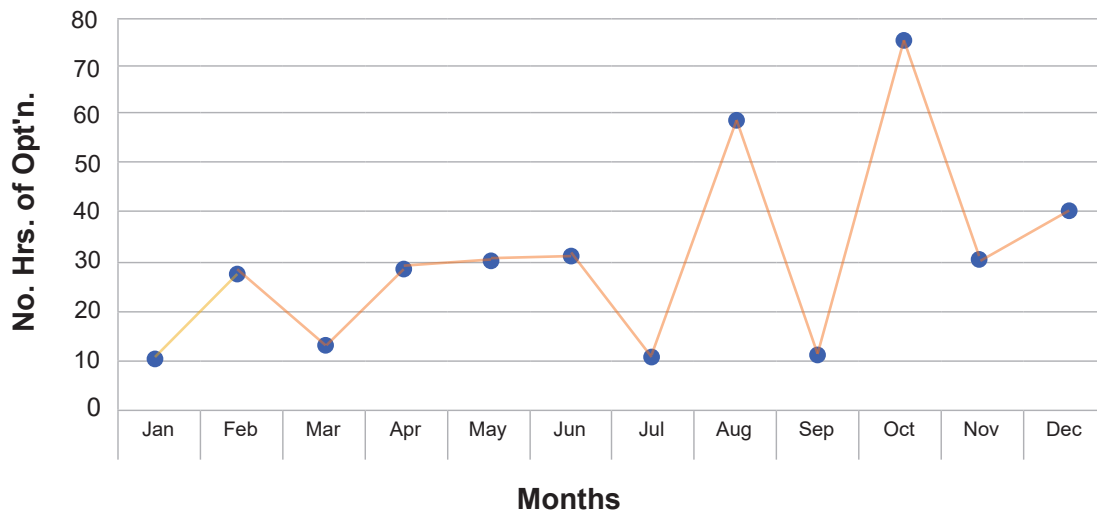
The Total production capacity for the four (4) PSDW is 466 m<sup>3</sup>/hr. In 2020, the total volume contributed by these four (4) Pumping Station/deep well is 4,067,166 m<sup>3</sup> representing 23 % of the total production of 17,575,232 m<sup>3</sup>.

For CY 2018, the system registered a normal operation of only 8,730 hours or 99.66% of the total hours for the year of 8,730 hours. For the remaining 30 hours or almost 0.34% of the time, the system experienced low pressure at Pump Station No. 1 resulting to no water condition at the end points of the catered service area. The 30 hours translated to an average of almost 1 day in a month of low water to no water condition.

Table 1 showed the hours of operation for the four (4) PS/DW

Every Pumping Station has a standby generator set to ensure continuous water supply during power failure. The combine generator set hours of operation is 144.

### Total Pumping Hours of Operation



## Water Quality

BCWD regularly conducts monitoring activities of the water from source to distribution lines to water meter clusters to ensure that the water produced and distributed to concessionaires are compliant with the standards set by the Philippine National Standard for Drinking Water (PNSDW). Monitoring activities included chlorine residual testing and collection of samples including analysis for physical and chemical parameters including laboratory bacteriological examination.

### I. Flushing and Valve Exercise

BCWD follows a regular flushing schedule covering the entire water supply system to maintain water quality at par with National Standard. In time, solids, like sand and other foreign materials accumulate in the system which eventually affects water quality. During flushing activity, pipeline in a particular service area is isolated to build up strong water pressure which forces solids and other similar foreign materials out to the hydrants and blow-offs leaving a fresh, good-tasting and high quality potable water in the pipelines after each flushing. Part of the flushing program involves testing the large main-line valves and fire hydrants to ensure that they are functioning properly. As of December 2020, BCWD maintains approximately 157 hydrants and 406 blow offs all with gate valves.

To minimize its impact to water service interruption, flushing activities are scheduled during night time (8:00pm to 4:00am) and is conducted by two (2) flushing personnel.

## II. Physical and Chemical Analysis

Water has physical and chemical properties and in order to fit human consumption these properties should be contained and controlled in certain level called parameters. Physical properties may include the odor, temperature, color, turbidity and total suspended solids while the chemical properties include pH (*water acidity*), salinity, total dissolved solids, total hardness and specific minerals. BCWD analyzes and monitors the physical and chemical properties of its water supply all throughout the entire system.

Butuan City Water District (BCWD) water supply mainly comes from the Taguibo River. Being a surface-water, it is considered vulnerable to contamination from agricultural, mining, water run-off, industrial, and domestic waste water discharges.

The Philippine National Standards for Drinking Water sets the Minimum Frequency of Sampling for Drinking-Water Supply Systems for Physical and Chemical Analysis

| Source and mode of Supply                                                            | Minimum Frequency |
|--------------------------------------------------------------------------------------|-------------------|
| a. Level I<br>b. Level II<br>c. Level III<br>d. Emergency Supplies of Drinking Water | Once a year       |
| e. Water Refiling Stations<br>f. Water Vending Machines                              | Twice a year      |

The BCWD belongs to Level III water supply system which required a minimum of once a year sampling frequency for each water source. However, as an assurance for the quality of the water sources being tapped, the BCWD Laboratory closely monitored the water sources monthly for the (1) Taguibo river, before it enters the Taguibo Aquatic Sources Corporation's treatment facility; (2) Raw water- the water it transmitted after the TASC treatment facility before it enters the BCWD Filtration Plant; (3) the Product water, as a result after passing and treated with gas chlorination process.

For the five deep well sources which serve as a back-up water supply source, namely pump station Nos. 1, 14, 15 and 17 and the support facilities such as the concrete and steel tanks/reservoirs, a monthly physical and chemical tests were conducted as to parameters that the BCWD Laboratory can perform. The analysis for heavy metals was done once a year thru other accredited laboratory capable to conduct the said analyses. All the tests were conducted in compliance with the PNSDW requirement.

The BCWD Water Testing Laboratory is a duly DOH Accredited Laboratory for Physical, Chemical and Bacteriological Analysis, thus it extends its laboratory services to neighboring Water Districts, LGUs, Refilling Stations, Mining companies and other private entities who voluntarily avail of the services for costs

Below is the tabulated monthly collection and analysis of water samples for Physical and Chemical Analysis

### Number of samples taken and analyzed for Physical and Chemical Analysis for the whole year.

| No. of samples                                  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Collected Monthly                               | 8   | 8   | 8   | 8   | 8   | 8   | 8   | 8   | 7   | 7   | 7   | 7   | 92    |
| Analyzed Monthly                                | 8   | 8   | 8   | 8   | 8   | 8   | 8   | 8   | 7   | 7   | 7   | 7   | 92    |
| Send-out for annual monitoring for heavy metals |     |     |     |     |     |     |     |     |     |     | 8   |     | 8     |
| Analyzed Outside / Client samples               | 28  | 36  | 12  | 0   | 4   | 6   | 6   | 14  | 18  | 31  | 32  | 20  | 207   |

The DOH Administrative Order 2007-2012 requires that for drinking water, priority parameters which includes heavy metals such as: cadmium, lead and arsenic should be determined. For CY 2018, considering that the BCWD Laboratory is not yet capable of handling the test required due to lack of equipment, water samples were send out to other DOH accredited laboratory for testing. For the year 2020, a total of 275 samples from outside sources for physical and chemical analysis were received and analysed.

### III. Bacteriological Analysis

Water borne bacteria is the most menacing concern of any water supply system since it can cause an epidemic in just a short period of time the moment a person drink a contaminated glass of water. Hence, BCWD see to it always that its water supply is bacteria-free.

In accordance with the PNSDW 2007, Table 1: Minimum Frequency of Sampling for Drinking-Water Supply Systems for Microbiological Examination, for a level III water supply system serving more than a 100,000 population, the minimum sampling points for Bacteriological Analysis is calculated as twenty samples plus one sample per 10,000 of the population. To get the total population served by the utility, number of service connections is multiplied with the number of persons per connection.

**Table 5. Minimum Frequency of Sampling for Drinking - Water Supply Systems for Microbiological Examination**

| Population Served | Minimum Frequency of Sampling for Total Coliform and Thermotolerant coliform/E.coli | Minimum Frequency of Sampling for Heterotropic Plate Count (HPC) | Point of Compliance |
|-------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------|
| Less than 5,000   | 2 samples monthly                                                                   | 2 samples monthly                                                | Consumers' tap      |
| 5,000-100,000     | 1 sample per 5,000 population + 2 additional samples monthly                        | 1 sample per 5,000 population + 2 additional samples monthly     | Consumers' tap      |
| More than 100,000 | 1 sample per 10,000 population, plus 12 additional samples monthly                  | Required, at least 40% of the sampling points                    | Consumers' tap      |

By the end of December 2020, there were a total of 56,616 service connections. This number multiplied with the average number of individuals per service connection which is five (5) will result to 268,080 served population. Following Table 1 of the PNSDW 2017, a total of 39 minimum samples is required for bacteriological analysis every month.

Instead of the required 39 sampling points, BCWD had established up to 54 sampling points for Bacteriological Analysis.

**Table 6. Number of samples taken and analyzed for Bacteriological Analysis for the whole year.**

| No. of samples                    | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Collected Monthly                 | 54  | 54  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 608   |
| Analyzed Monthly                  | 54  | 54  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 50  | 608   |
| Resample                          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     |
| Analyzed Outside / Client samples |     |     |     |     |     |     |     |     |     |     |     |     |       |



For the month of October and November, resampling after a conduct of flushing was also made in areas where results were found unsatisfactory until confirmation that the water running through the pipes is free from non-conforming matter

### 1.1 Frequency of Sampling and Re-sampling

The minimum number of samples to be collected and examined periodically must be based on the mode of source of water supply and the number of population served as required under the PNSDW 2007. However, frequency of sampling should also take into account the past record yielding unsatisfactory results. Resampling after a conduct of flushing was also made in areas where results were found unsatisfactory until confirmation that the water running through the pipes is free from non-conforming matter.

## IV. Chlorination

Microorganisms can be found in raw water from rivers, lakes and groundwater. While not all microorganisms are harmful to human health, there are some that may cause diseases in humans. These are called pathogens. Pathogens present in water can be transmitted through a drinking water distribution system, causing waterborne disease in those who consume it.

In order to combat waterborne diseases, different disinfection methods are used to inactivate pathogens. Along with other water treatment processes such as coagulation, sedimentation, and filtration, chlorination creates water that is safe for public consumption.

Chlorination is one of many methods that can be used to disinfect water. This method was first used over a century ago, and is still used today. It is a chemical disinfection method that uses various types of chlorine or chlorine-containing substances for the oxidation and disinfection potable water source.

BCWD has been using chlorine in water treatment, disinfection of new pipelines, tanks and reservoirs in which controlled amount of chlorine had been put in the system. BCWD's major water treatment is chlorination using Gas Chlorine injected into the water supply system through chlorinators while Liquid Chlorine is used to treat potable water stored in reservoirs and tanks; Granulated Chlorine is mostly used in disinfecting new lines before being integrated into the system, as shown in the table below:

For the year 2019, BCWD consumed a total of 35,520.70 kg of chlorine gas, 481 kg of powder chlorine and 7,275 liters of hypo chlorine used for treating the water prior to distribution to ensure that the water supplied to the concessionaires is safe for drinking:

### 1. CHLORINE CONSUMPTION

**Amount of chlorine gas (in kgs.) used for the whole year from the BCWD water sources.**

| Gas Chlorine     | Jan    | Feb    | Mar    | Apr    | May  | Jun    | Jul  | Aug  | Sept | Oct  | Nov  | Dec  | Total    |
|------------------|--------|--------|--------|--------|------|--------|------|------|------|------|------|------|----------|
| Filtration Plant | 1266.7 | 1066.7 | 1266.7 | 1456.7 | 1710 | 1100   | 2083 | 1632 | 2000 | 2000 | 2000 | 3000 | 20,581.8 |
| PS# 1            | 853    | 691.3  | 762.7  | 728    | 768  | 748    | 816  | 748  | 816  | 816  | 680  | 1224 | 9,651    |
| PS# 14           | 214.6  | 150.3  | 383.1  | 277.6  | 272  | 220    | 272  | 340  | 272  | 272  | 204  | 340  | 3,217.6  |
| PS# 15           | 247.8  | 151.9  | 212.4  | 199    | 204  | 171.2  | 136  | 0    | 136  | 136  | 136  | 340  | 2,070.3  |
| Total            | 2582.1 | 2060.2 | 2624.9 | 2661.3 | 2954 | 2239.2 | 3307 | 2720 | 3224 | 3224 | 3020 | 4904 | 35,520.7 |

**Amount of powdered chlorine (in kgs.) used for the whole year for the reservoirs and distribution lines.**

| Powder Chlorine    | Jan | Feb | Mar | Apr | May | Jun | Jul  | Aug | Sept | Oct | Nov | Dec  | Total |
|--------------------|-----|-----|-----|-----|-----|-----|------|-----|------|-----|-----|------|-------|
| Emily, kg          | 3   | 17  |     |     |     |     | 8.5  | 18  | 14.5 | 6   | 2   |      | 69    |
| Emenvil, kg        |     |     | 45  |     | 15  |     | 5    | 12  | 9.5  | 8   | 4   |      | 98.5  |
| Km. 6, kg          | 6   | 2   | 10  | 40  | 10  |     | 39   | 17  | 37   | 13  | 4   |      | 178   |
| Bit-os             |     |     |     |     |     |     |      |     |      | 13  | 19  | 25   | 57    |
| Distribution lines |     |     |     |     |     |     |      | 17  | 17   | 14  | 11  | 19.5 | 78.5  |
| Sub-Total          | 9   | 19  | 55  | 40  | 25  | 0   | 52.5 | 64  | 78   | 54  | 40  | 44.5 | 481   |

**Amount of Hypo chlorine (in liters) used for daily chlorination for the reservoirs**

| Hypo chlorine | Jan | Feb | Mar  | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Total |
|---------------|-----|-----|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-------|
| Emily         | 150 | 125 | 400  | 130 | 210 | 260 | 310 | 200 | 200  | 40  | 160 | 70  | 2,255 |
| Emenvil       | 50  | 160 | 220  | 20  | 20  | 340 | 280 | 200 | 200  | 30  | 320 | 70  | 1,910 |
| Km. 6         | 245 | 295 | 417  | 353 | 320 | 340 | 230 | 200 |      | 10  | 330 | 370 | 3,110 |
| Sub-total     | 445 | 580 | 1037 | 503 | 550 | 940 | 820 | 600 | 400  | 80  | 810 | 510 | 7,275 |

**2. ANNUAL DISINFECTION OF RESERVOIRS AND PUMP STATIONS**

Amount of powdered chlorine used for every disinfection activity conducted in 2019

| Facilities       | Date                    | Powder Chlorine Used, kg. |
|------------------|-------------------------|---------------------------|
| Emily            | Feb. 18, 2020           | 16                        |
| Emenvil          | March 11, 2020          | 37                        |
| Km. 6            | April 26, 2020          | 35                        |
| Pinamanculan     | May 28, 2020            | 26                        |
| Bit-os           | June 23, 2020           | 34                        |
| Pump Station 1   | June 19, 2020           | 2                         |
| Pump Station 14  | Sept. 2, 2020           | 2                         |
| Pump Station 15  | August 11, 2020         | 2                         |
| Pump Station 3   | July 17, 2020           | 2                         |
| Pump Station 17  | May 13 & Sept. 21, 2020 | 4                         |
| <b>Sub-Total</b> |                         | <b>160</b>                |

## 2. Chlorine Residual Monitoring

The presence of chlorine from the source up to the end points of the supply lines must be traced to ensure pathogens and other micro-organism could thrive in drinking water so much that BCWD regularly checks the trace of chlorine all throughout the water supply system.

Based on **Table 7** below, regular monitoring of chlorine residual was conducted at various points in the water system to ensure that the water running is within the approved level of 0.3 (*minimum*) to 1.5 (*maximum*) mg/L. For samples where free chlorine fell out of the range, the bacteriological results were checked and found to be still compliant with PNSDW. Adjustments of chlorine dosing at pump station 1 and at distribution lines of tanks were regularly made in order to limit the non-compliant reading of chlorine residual.

| No. of samples     | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Analyzed           | 642 | 695 | 695 | 645 | 697 | 668 | 669 | 682 | 642 | 687 | 663 | 669 | 8,054 |
| Within 0.3-1.5 ppm | 642 | 695 | 695 | 645 | 691 | 661 | 661 | 674 | 633 | 676 | 654 | 661 | 7,988 |
| Failed/ <0.3ppm    | 0   | 0   | 0   | 0   | 6   | 7   | 8   | 8   | 9   | 11  | 9   | 8   | 66    |

Having a good water quality is easy as you seemed to figure out but yet it entails a lot of homework to do to be at par with international standards. Once you attained it the next similar move is to maintain which calls for a cycle of activity programs and procedures and these are exactly what BCWD is doing in keeping a good water quality.

## WATER SALES

### Water Billings

Rates and fees associated with water sales typically represent the majority of a utility's revenue. Water utilities need revenues to meet their mission of providing safe, reliable, and high-quality water. Revenues also ensure that a water utility can cover its expenses, which can include debt service, capital improvements, personnel costs, energy, chemicals, and operations and maintenance.

BCWD generates revenues from water sales and other service charges to cover costs of water production; hence, it depends solely on the revenues generated from the sale of its services as a water utility. In the average monthly active connections of 52,973 the average billed connections is 99.50% or 52,710 with an average monthly billings of ₱32,525,832.49. The revenues from water sales hit ₱381,436,383.98 mark, this is 0.07% lower than last year and surcharges on total billings peg at ₱8,873,605.95 which is 4.96% lower than 2019 - this was the effect of moratorium on surcharge from March to June 2020 and around October to November 2020.

## WATER SALES

### TOTAL BILLING ON WATER SALES AND PENALTY YEAR 2020

| DATE         | CURRENT               | PENALTY             | TOTAL                 | % of billing subject to penalty |
|--------------|-----------------------|---------------------|-----------------------|---------------------------------|
| January      | 35,322,852.93         | 871,214.98          | 36,194,067.91         | 41.11%                          |
| February     | 30,177,667.31         | 834,175.75          | 31,011,843.06         | 46.07%                          |
| March        | 34,246,592.36         | 437,335.07          | 34,683,927.43         | 21.28%                          |
| April        | 33,399,096.57         | (1,066.82)          | 33,398,029.75         | -0.05%                          |
| May          | 29,932,200.03         | (618.24)            | 29,931,581.79         | -0.03%                          |
| June         | 32,565,460.60         | 686,812.02          | 33,252,272.62         | 35.15%                          |
| July         | 30,533,893.34         | 1,175,156.95        | 31,709,050.29         | 64.14%                          |
| August       | 32,208,158.17         | 1,023,284.26        | 33,231,442.43         | 52.95%                          |
| September    | 29,665,797.91         | 1,127,273.99        | 30,793,071.90         | 63.33%                          |
| October      | 31,065,597.46         | 981,608.97          | 32,047,206.43         | 52.66%                          |
| November     | 32,241,329.14         | 790,605.03          | 33,031,934.17         | 40.87%                          |
| December     |                       |                     | 31,025,562.15         | 52.52%                          |
| <b>TOTAL</b> | <b>381,436,383.98</b> | <b>8,873,605.95</b> | <b>390,309,989.93</b> | <b>38.77%</b>                   |

## SURCHARGE

| DATE         | 2018                | 2019                | 2020                |
|--------------|---------------------|---------------------|---------------------|
| January      | 670,871.42          | 905,053.36          | 871,214.98          |
| February     | 661,866.86          | 664,968.82          | 834,175.75          |
| March        | 633,323.82          | 766,026.21          | 437,335.07          |
| April        | 685,003.81          | 721,964.62          | (1,066.82)          |
| May          | 820,636.14          | 765,276.10          | (618.24)            |
| June         | 729,432.23          | 768,820.21          | 686,812.02          |
| July         | 713,065.91          | 847,404.92          | 1,175,156.95        |
| August       | 821,930.22          | 833,426.92          | 1,023,284.26        |
| September    | 752,285.31          | 667,620.89          | 1,127,273.99        |
| October      | 729,586.14          | 888,554.68          | 981,608.97          |
| November     | 648,730.81          | 731,378.20          | 790,605.03          |
| December     | 728,211.00          | 776,446.31          | 947,823.99          |
| <b>TOTAL</b> | <b>8,594,943.67</b> | <b>9,336,941.24</b> | <b>8,873,605.95</b> |

BCWD imposes surcharge of 6% of the current bill after due date which is 2.32% of the total billings, the table shows.

The water revenue is directly affected by average monthly consumption (AMC) per connection. In 2020 the MMC was 15.55 cubic meters which is 0.34 cubic meters lower compared to 2019. This may have been caused by intermittent low water pressure, service interruptions due to leak repair in various parts of the water system and other contributing factors.

Although the residential consumption increased due to community quarantine status – where people are in their homes; on the other hand, government and commercial consumption decreased because of the 3-day work week operation scheme and the increase in the number of request-closure of several business establishment caused by scare of COVID-19 pandemic which resulted to the over-all lower average monthly consumption per connection

### Senior Citizens Discount

BCWD grants discounts to seniors paying their water accounts on time pursuant to **EXPANDED SENIOR CITIZENS ACT OF 2010 (RA 9994)**. As of December 2020, there are 946 number of elderly concessionaires availing of the five per cent 5% senior citizen discount (SCD) given to accounts with senior citizen users whose monthly consumption does not exceed thirty cubic meters. In 2020, an average of Php19,485.39 per month was recorded as SC discount – posted a 13% decrease compared to SCD applicants last year.

## COLLECTIONS

We made sure that water billings are converted into cash by implementing the tight collection strategies through service closure. Water connections are disconnected 3 days after receipt of “Red Bill” hence, were able to collect the amount of P 379,742,959.95 at the rate of 97.29% of total billings. The months of March, April and May showed the lowest collection performance due to the moratorium imposed by government to ease financial burden on consumers brought about by COVID-19 pandemic.

### BILLINGS AND COLLECTIONS

JANUARY-DECEMBER 2020

| DATE                   | BILLINGS              | COLLECTIONS           | PERCENT       |
|------------------------|-----------------------|-----------------------|---------------|
| January                | 36,194,067.91         | 37,872,346.60         | 104.64%       |
| February               | 31,011,843.06         | 33,170,743.80         | 106.96%       |
| March                  | 34,683,927.43         | 23,284,272.90         | 67.13%        |
| April                  | 33,398,029.75         | 9,073,690.31          | 27.17%        |
| May                    | 29,931,581.79         | 22,194,571.29         | 74.15%        |
| June                   | 33,252,272.62         | 42,846,561.45         | 128.85%       |
| July                   | 31,709,050.29         | 36,796,754.59         | 116.04%       |
| August                 | 33,231,442.43         | 32,535,602.88         | 97.91%        |
| September              | 30,793,071.90         | 32,118,082.78         | 104.30%       |
| October                | 32,047,206.43         | 35,116,779.84         | 109.58%       |
| November               | 33,031,934.17         | 40,350,721.15         | 122.16%       |
| December               | 31,025,562.15         | 34,382,832.36         | 110.82%       |
| <b>TOTAL</b>           | <b>390,309,989.93</b> | <b>379,742,959.95</b> | <b>97.29%</b> |
| <b>Average per mo.</b> | <b>32,525,832.49</b>  | <b>31,645,246.66</b>  | <b>97.29%</b> |

Noticeably, collections included billings in arrears which explained customers paid more than their current bill – which made cash collection literally over current billings.

## CUSTOMERS IN ARREARS

### BILLED CONNECTIONS AND CUSTOMER-IN-ARREARS (ACTIVE) YEAR 2020

| DATE                   | BILLED CONNECTIONS | CUSTOMER-IN-ARREARS | %             |
|------------------------|--------------------|---------------------|---------------|
| January                | 51,536             | 12,882              | 25.00%        |
| February               | 51,815             | 14,490              | 27.96%        |
| March                  | 51,974             | 22,057              | 42.44%        |
| April                  | 52,260             | 55,071              | 105.38%       |
| May                    | 52,396             | 79,033              | 150.84%       |
| June                   | 52,602             | 65,483              | 124.49%       |
| July                   | 52,858             | 56,842              | 107.54%       |
| August                 | 53,245             | 54,836              | 102.99%       |
| September              | 53,487             | 54,266              | 101.46%       |
| October                | 53,579             | 50,207              | 93.71%        |
| November               | 53,489             | 36,822              | 68.84%        |
| December               | 53,275             | 34,405              | 64.58%        |
| <b>MONTHLY AVERAGE</b> | <b>52,710</b>      | <b>44,700</b>       | <b>84.80%</b> |

An average of 84.80% or 44,800 billed connections are customers in arrears. Among the 44,700, 0.32% or 142 are customers availing on instalment to settle their leakage billings and old inactive accounts in the amount of ₱1,965,972.06. Out of the 142 concessionaires, 12 were able to settle their accounts in full and the rest still continuing to settle their respective accounts.

### RED BILL AND SERVICE CLOSURE

When customer received “red bill” it suggests that he/she defaulted paying last month’s water bill. The red bill now indicates the current bill plus the arrears – upon receipt, the customer is given **3 days to settle the water accounts** in full otherwise, the subject water connection shall be disconnected on the fourth (4<sup>th</sup>) day. This is one collection strategy adapted by BCWD to control defaults in water bill payment.

### BCWD ACCREDITED PAYMENT CENTERS

Customers need not go to BCWD office to pay their water bills, for ease and convenience BCWD has accredited the following collection agents to accept payments of you water bills.

**Accredited BCWD Collecting Centers are the following:**

1. **Berry Happy Mart** (Pizarro St., Brgy. J.P. Rizal);
2. **C5 Hardware** (S1 Cassion Building, near Rosewood Plains Subdivision, Villa Kananga);
3. **Clarhez Ticketing Services** (National Highway, Brgy. Libertad, Butuan City);
4. **JPL Bayad Center** (Brgy. Ampayon, Butuan City near Public Market);
5. **TAM Payment and Remittance Center** (Unit 1 Wing-on Corporate Building, Brgy. Holy Redeemer).
6. **Veterans Bank**

BCWD is considering to embarking on electronic remittance/payment platform system like **GCash**, **PayMaya** and the likes to keep abreast with latest technology and trends.

## METER ACCURACY

Water meter is the interface between the water utility and its customers, the meter records water usage or consumption of a customer. The water utility records customer's usage as water sales or revenue, it comes back to the customer in a form of a water bill which the latter pays the monetary value of the utility services he receives by way of having access to potable water. On this account, water meter accuracy plays a major important role because inaccurate meter is an operation hazard resulting to losses. Inaccurate water meter has been a contributory to apparent water losses and ultimately to non-revenue water being the hot issue of all water utilities in the country today.

BCWD initiated advocacy on water meter accuracy when it launched its own Water Meter Maintenance Program (*WMMP*) many years back. The objective of the program is to ensure that water meters in service for a long period shall be pulled out and replaced. The program uses color coding to establish a reckoning date when meters are installed. It is estimated that, under normal condition, water meter life span for accuracy is good only for five (5) years. Since BCWD has more than 50,000 service connections, it means a massive replacement until the entire system will be covered.

In 2020, BCWD recalled 5,153 water meters in the continuing implementation of the program; for the 1<sup>st</sup> semester 2,705 and for 2<sup>nd</sup> Semester 2,448 water meters replaced. This is a regular activity conducted by PAMD by replacing the water meters aged five (5) years - for the years' target are those service connections installed in the year 2015. The target for the year is **5,869 service connections**.

| MONTH        | RECALLED / REPLACED METERS |
|--------------|----------------------------|
| January      | 742                        |
| February     | 448                        |
| March        | 258                        |
| April        | 314                        |
| May          | 204                        |
| June         | 739                        |
| July         | 915                        |
| August       | 601                        |
| September    | 201                        |
| October      | 399                        |
| November     | 42                         |
| December     | 290                        |
| <b>TOTAL</b> | <b>5,153</b>               |

## METER CALIBRATION

Water meter calibration may be requested by the customer if he wanted to check the accuracy of his meter – He may visit BCWD office to file his request and he will be informed of the calibration results accordingly.

All water meters have passed calibration parameters before installation to ensure accurate water consumption billing – under and over registration of actual water usage is a serious water meter accuracy issue which need to be addressed.

# MAINTENANCE

## PIPELINES MAINTENANCE

BCWD water supply system has gone a long way more than four (4) decades of continues service. Being so, its pipe lines system caught by wear and tear, from time to time, burst out to leakages which need immediate repairs. Leakages in the transmission and distribution lines cause low water pressure and increased real water losses and ultimately the non-revenue water.

BCWD technical men are always in action to repair these leakages including those busted pipelines caused by road construction/excavation and similar infrastructure projects of the city. Leakage repair can be simple and complex depending on the size of pipe and depth of excavation. Simple leak repair requires excavation with a depth of less than 0.6 meter while complex repair necessitate an excavation of 0.6 meter and above and the size of pipes range from 2"Ø up to 12"Ø in diameter. There were 197 complex cases of leak repairs while 90 cases were simple. Among the leakages, the leaking transmission and distribution mains are the most intensive and most challenging because high water pressure.

## GATE VALVES, BLOW-OFFS & HYDRANTS

Gate valves are used in controlling pressure and isolation of pipeline under repair and maintenance. There are 107 gate valves identified all throughout the water system maintained all year round. Activities include installation of valve box cover, cementing of concrete pad, replacement of defective and/or leaking gate valves and riser elevation.

A blow-off is usually installed at end points of the system to make flushing and other maintenance activities easier while a (fire) hydrant is primarily use as access point to water in case of fire or it can also be used in flushing activities to flash-out solids and other materials that have entered into the pipelines. Since 2015, BCWD initiated an inventory and tagging of all existing hydrants for maintenance and monitoring. As of December 2020, there were 406 Blow-offs maintained and 157 Fire Hydrants maintained. These tagged Blow-offs and Fire Hydrants are painted and properly tagged/labelled with numbers and are maintained all year round. Sometimes a hydrant or blow-off need to be relocated for convenience during the conduct of flushing activities.





## WATER METER MAINTENANCE

Equally critical is the maintenance of water meters; water sales begin at water meters which record and measure water consumption of customers. If water meters falter giving inaccurate under readings of water consumption proximately causing serious operation issues like undervalued water sales. In service water meters, if not well maintained, can cause apparent water losses which end up in non-revenue water.

There are many factors affecting water meter efficiency such as water quality. BCWD water meter technicians perform meter check-up, testing and calibration in the field upon the request of customers. The table below shows the number of water meters tested and calibrated all year round.



## WATER METER SHOP – CALIBRATION OF WATER METERS & REPAIR OF WATER METER INSERT

| WATER METER SHOP             |              |              |
|------------------------------|--------------|--------------|
| A.                           | Total (2019) | Total (2020) |
| New Water Meter Assembly     | 0            | 0            |
| Withdrawn / Retrieved        | 2,726        | 2,424        |
| New Inserts                  | 6,240        | 10,105       |
| Repaired Inserts             | 1,458        | 23           |
| TOTAL                        | 10,424       | 12,552       |
| B. Field Testing Calibration | 860          | 668          |

## MAINTENANCE OF SERVICE CONNECTION

Customers come to BCWD office to make request for maintenance of their water connections. The most interactive window of BCWD service is the maintenance of individual water connection whereby concessionaires react to the quality of service they received.

### • Maintenance & Service Requests

Maintenance and service requests are service connection maintenance routines initiated either by BCWD or requested by the customers. The front-liners at the Commercial Department received these requests from customers and from meter readers and service investigators of BCWD. These are being processed into job orders and forwarded to Pipelines and appurtenances and Maintenance Department (PAMD) for immediate and appropriate action. The Maintenance and Service Request Orders are sub-divided into five (5) major categories, namely: Reconnection (Reopening of disconnected service connections & Reopening/Install Water Meter), Withdrawal of Water Meters (includes Request Closure Withdraw and Withdraw Water Meter Orders), Change Meters (Stolen/Damaged Meters and/or regular maintenance), Transfer Water Meters (includes rehabilitation of clusters) and Leakages or other maintenance repairs.

The PAMD execute these maintenance orders the earliest possible time according to the timeline indicated in the citizens charter.

| Nature of Orders                         | Balance 2019 (a) | 2020          |                 |               | Variance (Balance Forwarded to 2019) (A-B) |
|------------------------------------------|------------------|---------------|-----------------|---------------|--------------------------------------------|
|                                          |                  | RO (b)        | TRO (a+b) = (A) | TAO (B)       |                                            |
| RIM                                      | 0                | 2,568         | 2,568           | 2,568         | 0                                          |
| REO                                      | 0                | 5,052         | 5,052           | 5,052         | 0                                          |
| RCW                                      | 0                | 977           | 977             | 977           | 0                                          |
| WWM/Disco                                | 38               | 2,502         | 2,540           | 2,475         | 38                                         |
| CHM                                      | 0                | 697           | 697             | 697           | 0                                          |
| TWM/Rehab Orders                         | 0                | 1,551         | 1,551           | 1,551         | 0                                          |
| Leakages & Other Repairs for Maintenance | 0                | 4,406         | 4,406           | 4,406         | 0                                          |
| <b>Total</b>                             | <b>38</b>        | <b>17,754</b> | <b>17,792</b>   | <b>17,726</b> | <b>66</b>                                  |

**Legend:**

- RIM** - reopen install meter
- REO** - reopen (*padlock*)
- RCW** - request closure  
withdraw meter
- CHM** - change meter
- TWM**- transfer water meter

**• SERVICE CLOSURE**

Service disconnection is a policy control measure put in place by BCWD requiring customer to pay their water bill when it becomes due. Generally, a customer would be disconnected from the water service line three (3) days after receipt of “**red bill**” – consequently, on the 4<sup>th</sup> day, his water connection is locked using a customize locking instrument called “**barrel lock**”; he is given another three (3) days to settle his water account after which withdrawal of water meter follows. There are also some causes for service closure like overdue promissory notes and those under special closure orders.

On the other hand, service closure by withdrawal of water meter may also be done upon the request of a customer for reasons other than non-payment of water bill. When a customer happened to be not using the service connection anymore or that he/she may not be around for a longer time in which case he/she can request for service disconnection – water meter withdrawal upon his/her request. The rationale behind this, the subject customer will not be billed because the service connection is inactive unlike the other way around if the same customer wishes to retain the water meter in the same condition, he/she would surely be billed monthly even if there is no water consumption or zero bill ... still minimum bill applies.

In the 1<sup>st</sup> quarter of 2020 COVID-19 virus has become pandemic spread havoc in the city and its nearby provinces. Its impact in the economy has been serious sending business establishments to slowdown and even worst stopped operation. Many workers have been laid-off from their respective jobs while more others reduce working time. BCWD was not spared, it absorbed the hardest blow; it did not stopped operation so much that it continue to provide water at homes where people forced to stay because of home quarantine orders from the Local Government Unit (LGU) in an effort to control the spread of contamination. In effect,

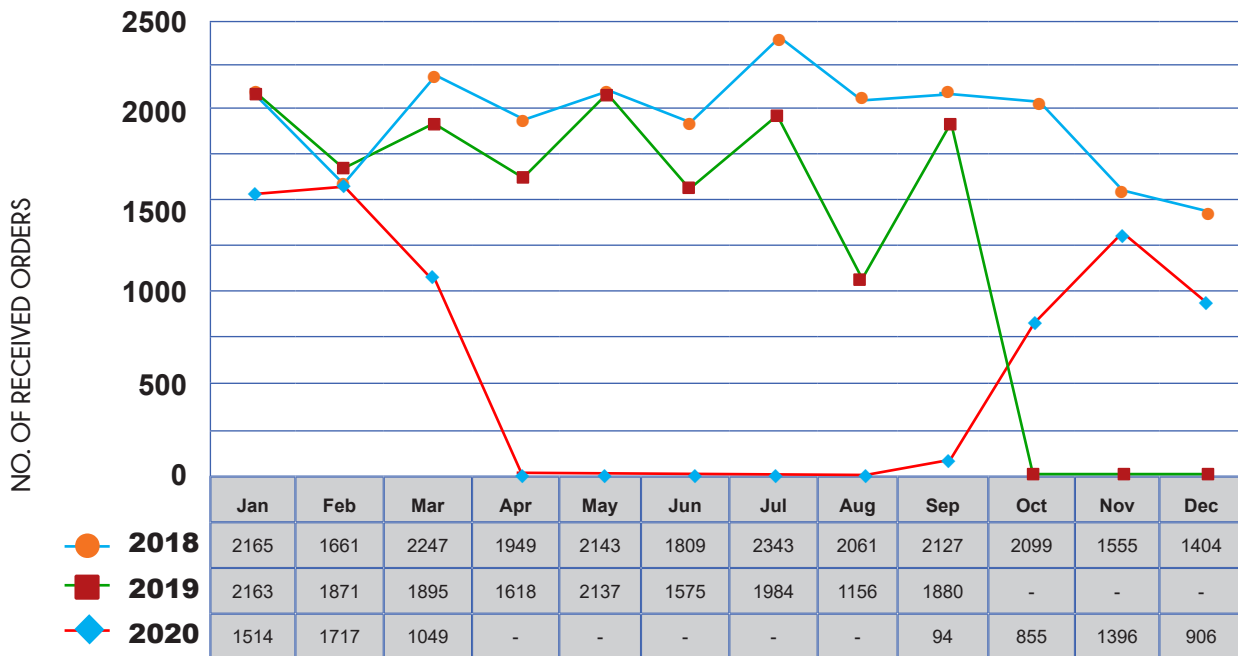
water consumption rises as reflected in the water bill – unfortunately, water payment cannot be enforced because of moratorium giving consumers option to pay or deferred bills payment without having their water service disconnected. Corollary, collection abruptly dropped while the cost of operation remains the same.

The moratorium on water bills payment has also suspended the disconnection of defaulting customers half way in March through September 2020. Disconnection is in random for accounts with special orders and overdue promissory notes.

This event brought a massive hard blow on the collection efficiency. As a result, for the year 2020, PAMD has only received a total of 7,533 disconnection orders. Out of which, 7,011 orders or 93.07% are disconnected (*in actual*) while the remaining 6.93% or 652 orders are deferred/hold for disconnection - accounts that are remarked for installation and/or replacement of damaged angle valves and those that are complex.

The actual disconnected service connections for 2020 (7011) is the lowest in the last three (3) years; in 2018 (23,879) by 240.59% or 16,868 service connections and in 2019 (19,995) by 185.19% or 12,984 service connections.

## DISCONNECTION ORDERS 2018 and 2020



## • RECONNECTION OF SERVICE CONNECTION

The first question a customer would ask after paying for his/her disconnected water connection, “when will my service connection be reconnected?” It is natural for a customer to have his water line back immediately after settlement, this is why BCWD has always prioritized reconnection more than among the maintenance orders because the customers expected that their respective disconnected service lines be reconnected as soon as they got home. BCWD has already anticipated customers’ behavior and response in this setting, members of the reconnection team in the field received reconnection orders through mobile phone call/text or by radio to act on each every reconnection order fast.

As with service closure, reconnection team has to restore what has been done in the disconnection after the customer complied with the requirement. The reconnection team may just unlock the service line or re-install the water meter, as the case may be. The team is aware of the critical time element involve in this activity because delay always brings those customers back in the office in fighting mode.

On the other hand, received orders in 2020 (5,127) is lower than 2019 (5,426) by 5.51% or 299 orders. However, received orders in 2020 is higher than 2018 (4,300) by 16.13% or 827 orders.

The total accomplishment for RIM for the year 2020 is 5,130, which comprises 4,901 as actual installed meters which represents 95.54% of the total accomplishment. Only 4.46% or 229 orders; cancelled orders either by encoding error or returned orders.

However, total acted orders in 2020 (5,130) is lesser than 2019 (5,431) by 5.54% or 301 orders. Yet, total acted orders for 2020 is higher compared to 2018 (4,294) by 19.47% or 836 orders.

## • WITHDRAWAL OF WATER METERS

There are two conditions which may result to withdrawal of water meter, either the customer has requested so or that the subject connection has been previously disconnected for non- payment of water bill, three (3) days thereafter, if still no settlement is received, water meter will be withdrawn.

All received 698 RCW orders are all acted accordingly within the year, But for the last two (2) years, the total received/acted orders in 2020 (698) is lower compared to 2019 (732) by 4.87% or 34 orders. Yet, much lower than 2018 by 35.67% or 249 orders. This trend means that more customers are now paying their water bills on time to avoid inconvenience of having their respective water service closed.

For CY 2020, the actual accomplishment for withdrawal of water meters (RCW and WWM) is 5,189. This exceeds the target of 3,960 by 23.68% or 1,229 orders, as disconnection team members assist in the withdrawal of water meters whenever there are fewer orders for disconnection. 1,770 orders are considered part of the total accomplishment of the team. As of end of CY 2020, only 45 or 0.65% remained un-acted.

**These un-acted orders (backlog) are prioritized for withdrawal in January 2020, see table below.**

| Nature of Orders | RO    | AO    |        |       | Variance (Based on Monthly Monitoring) |
|------------------|-------|-------|--------|-------|----------------------------------------|
|                  |       | C1    | C2+H+R | TAO   |                                        |
| RCW              | 698   | 684   | 14     | 698   | 0                                      |
| WWM              | 6,208 | 4,505 | 1,756  | 6,261 | 45                                     |
| Total            | 6,906 | 5,189 | 1,770  | 6,959 | 45                                     |

## • CHANGE METER

There are enumerable conditions for a service connections owner to have their water meters changed. The water meter is a measuring instrument which most likely to be overtaken by wear and tear due to daily use. It may malfunction at any given time because of dirt or foreign tiny particles that may have enter into the water meter mechanism causing the same to falter and give incorrect water usage measurement reading.

Moreover, water meter is sensitive and fragile; hence, it can easily be broken or damaged. Since water meter is made of brass material, it is a hot item in the eyes of the thieves and scrap boys, many customers lost their water meters to thieves that were sold in the scrap iron and junk shops.

All those mentioned conditions require change of water meters at no cost to the customer except for damaged unit. The water meter installed in a service connection is a property of BCWD and under the contract of service the customer is oblige to protect and keep it safe, eventually, when it is broken or damaged the customer will pay for it.

There are 1,008 change meter orders; comprises 87.70% or 884 actual number of changed meters and 12.30% or 124 orders - orders that are cancelled, hold and or returned orders. But, all received orders for the year are all acted accordingly.

## • TRANSFER WATER METER/REHABILITATION OF CLUSTERS

These are among the regular maintenance activities of BCWD – transfer of water meter to ideal location and rehabilitation of water meter cluster. Service connections affected by road construction and widening or similar developmental makeover need to be transferred to new ideal location. There are also meter clusters which have been poorly constructed before or may have been downed for other reasons that needed to be rehabilitated. Technically, water meters in up-side-down position such as in downed clusters cannot functions properly and tending to give inaccurate water usage readings.

A total of 358 transferred water meters (*based on the actual remarks of the orders for maintenance*) and completed the Department's target to rehabilitate 1,000 clusters in an identified area. Rehabilitation of clusters includes elevation/standardization of clusters (4 units of water meter in a single cluster) and transfer of cluster to its proper location.

# **PERSONNEL & STAFFING**

## **STAFF PROFILE**

The total work force of the District as of December 31, 2020 consisted of 217 employees. Out of this, 159 (73%) were employees with Permanent status and 58 (27%) with Contract of Service status.

Out of the 229 existing positions of BCWD, 159 have been filled up and distributed to the different offices/departments : the Office of the Board of Directors, Office of the General Manager and Management Services Department – 20 positions; Administrative Services Department – 36 positions; Finance Department – 17 positions; Commercial Services Department – 25 positions; Engineering Department – 14 positions; Pipeline and Appurtenances Maintenance Department – 28 positions; and Production & Distribution Department – 19 positions.

In the distribution of personnel, which includes the reassigned personnel from one office/department to another office/department, Administrative Services Department has the highest personnel count – 44 (20%), followed by the Pipeline & Appurtenances Maintenance Department – 41 (19%), Commercial Services Department – 33 (15%), Production & Distribution Department – 32 (15%), OBD/OGM/MSD - 26 (12%), the Finance Department – 21 (10%) and Engineering Department – 20 (09%).

| <b>DEPARTMENT</b>  | <b>NO. OF PERSONNEL</b> | <b>PERCENTAGE (%)</b> |
|--------------------|-------------------------|-----------------------|
| ADMIN              | 44                      | 20%                   |
| PAMD               | 41                      | 19%                   |
| COMMERCIAL         | 33                      | 15%                   |
| PRODUCTION         | 32                      | 15%                   |
| OBD/OGM/MSD        | 26                      | 12%                   |
| FINANCE            | 21                      | 10%                   |
| ENGINEERING        | 20                      | 09%                   |
| <b>GRAND TOTAL</b> | <b>217</b>              | <b>100%</b>           |

## STAFFING / NUMBER OF PERSONNEL

### As of December 31, 2020

| LEVEL / CLASSIFICATION OF POSITIONS       | OBD/OGM/MSD |           |           | Admin     |          |           | Finance  |           |           | Commercial |           |           | Engineering |          |           | PAMD      |          |           | Production |          |           | Grand Total |           |            |
|-------------------------------------------|-------------|-----------|-----------|-----------|----------|-----------|----------|-----------|-----------|------------|-----------|-----------|-------------|----------|-----------|-----------|----------|-----------|------------|----------|-----------|-------------|-----------|------------|
|                                           | M           | F         | Total     | M         | F        | Total     | M        | F         | Total     | M          | F         | Total     | M           | F        | Total     | M         | F        | Total     | M          | F        | Total     | M           | F         | Total      |
| <b>A. PLANTILLA</b>                       |             |           |           |           |          |           |          |           |           |            |           |           |             |          |           |           |          |           |            |          |           |             |           |            |
| Existing                                  |             |           | 32        |           |          | 45        |          |           | 23        |            |           | 35        |             |          | 21        |           |          | 39        |            |          | 34        |             |           | 229        |
| Filled                                    | 9           | 11        | 20        | 30        | 6        | 36        | 3        | 14        | 17        | 16         | 9         | 25        | 12          | 2        | 14        | 21        | 7        | 28        | 16         | 3        | 19        | 107         | 52        | 159        |
| Unfilled                                  |             |           | 12        |           |          | 9         |          |           | 6         |            |           | 10        |             |          | 7         |           |          | 11        |            |          | 15        |             |           | 70         |
| <b>B. ELIGIBILITY</b>                     |             |           |           |           |          |           |          |           |           |            |           |           |             |          |           |           |          |           |            |          |           |             |           |            |
| Career Executive                          | 0           | 0         | 0         | 0         | 0        | 0         | 0        | 0         | 0         | 0          | 0         | 0         | 0           | 0        | 0         | 0         | 0        | 0         | 0          | 0        | 0         | 0           | 0         | 0          |
| Professional                              | 8           | 9         | 17        | 12        | 6        | 18        | 3        | 11        | 14        | 13         | 8         | 21        | 3           | 2        | 5         | 4         | 7        | 11        | 4          | 3        | 7         | 47          | 46        | 93         |
| Non-Prof / Technical                      | 0           | 2         | 2         | 13        | 0        | 13        | 0        | 3         | 3         | 2          | 1         | 3         | 5           | 0        | 5         | 4         | 0        | 4         | 6          | 0        | 6         | 21          | 6         | 36         |
| No Eligibility                            | 1           | 0         | 1         | 5         | 0        | 5         | 0        | 0         | 0         | 1          | 0         | 1         | 4           | 0        | 4         | 13        | 0        | 13        | 6          | 0        | 6         | 39          | 0         | 30         |
| <b>C. POSITIONS</b>                       |             |           |           |           |          |           |          |           |           |            |           |           |             |          |           |           |          |           |            |          |           |             |           |            |
| By Level                                  |             |           |           |           |          |           |          |           |           |            |           |           |             |          |           |           |          |           |            |          |           |             |           |            |
| First Level                               | 5           | 7         | 12        | 23        | 3        | 26        | 3        | 7         | 10        | 14         | 7         | 21        | 10          | 0        | 10        | 18        | 3        | 21        | 13         | 1        | 14        | 86          | 28        | 114        |
| Second Level                              | 4           | 4         | 8         | 7         | 3        | 10        | 0        | 7         | 7         | 2          | 2         | 4         | 2           | 2        | 4         | 3         | 4        | 7         | 3          | 2        | 5         | 21          | 24        | 45         |
| Third Level                               | 0           | 0         | 0         | 0         | 0        | 0         | 0        | 0         | 0         | 0          | 0         | 0         | 0           | 0        | 0         | 0         | 0        | 0         | 0          | 0        | 0         | 0           | 0         | 0          |
| <b>BY STATUS</b>                          |             |           |           |           |          |           |          |           |           |            |           |           |             |          |           |           |          |           |            |          |           |             |           |            |
| Permanent                                 | 9           | 11        | 20        | 30        | 6        | 36        | 3        | 14        | 17        | 16         | 9         | 25        | 12          | 2        | 14        | 21        | 7        | 28        | 16         | 3        | 19        | 107         | 52        | 159        |
| Temporary                                 | 0           | 0         | 0         | 0         | 0        | 0         | 0        | 0         | 0         | 0          | 0         | 0         | 0           | 0        | 0         | 0         | 0        | 0         | 0          | 0        | 0         | 0           | 0         | 0          |
| Sub-Total 1                               | 9           | 11        | 20        | 30        | 6        | 36        | 3        | 14        | 17        | 16         | 9         | 25        | 12          | 2        | 14        | 21        | 7        | 28        | 16         | 3        | 19        | 107         | 52        | 159        |
| D. CONTRAC-TUAL (CON)                     | 0           | 0         | 0         | 0         | 0        | 0         | 0        | 0         | 0         | 0          | 0         | 0         | 0           | 0        | 0         | 0         | 0        | 0         | 0          | 0        | 0         | 0           | 0         | 0          |
| E. CONTRACT OF SERVICE                    | 2           | 4         | 6         | 6         | 2        | 8         | 2        | 2         | 4         | 5          | 3         | 8         | 5           | 1        | 6         | 12        | 1        | 13        | 12         | 1        | 13        | 44          | 14        | 58         |
| Sub-Total 2 (D+E)                         | 2           | 4         | 6         | 6         | 2        | 8         | 2        | 2         | 4         | 5          | 3         | 8         | 5           | 1        | 6         | 12        | 1        | 13        | 12         | 1        | 13        | 44          | 14        | 58         |
| <b>GRAND TOTAL (Sub-Totals 1 &amp; 2)</b> | <b>11</b>   | <b>15</b> | <b>26</b> | <b>36</b> | <b>8</b> | <b>44</b> | <b>5</b> | <b>16</b> | <b>21</b> | <b>21</b>  | <b>12</b> | <b>33</b> | <b>17</b>   | <b>3</b> | <b>20</b> | <b>33</b> | <b>8</b> | <b>41</b> | <b>28</b>  | <b>4</b> | <b>32</b> | <b>151</b>  | <b>66</b> | <b>217</b> |

BCWD was once operating as a semi-private entity under partial control of the local government of Butuan with governing board members are all appointed by the city mayor. Civil Service eligibility was not required before; hence, 20% of the employees have no eligibility. By the time all water districts in the country were put under the control of national government, by virtue of a supreme court ruling, those employees retained their positions in status quo. As such they cannot be promoted to higher positions until they become civil service eligible.

| Eligibility                 | Number     | Percentage (%) |
|-----------------------------|------------|----------------|
| Career Executive            | 0          | 0%             |
| Career Service Professional | 93         | 58%            |
| Non-professional/technical  | 36         | 23%            |
| No eligibility              | 30         | 19%            |
| <b>Total</b>                | <b>159</b> | <b>100%</b>    |

## I. PERSONNEL RECRUITMENT

| STATUS              | ITEMS PROCESSED | 2019 | 2020 | VARIANCE |
|---------------------|-----------------|------|------|----------|
| Permanent           | Appointments    | 1    | 31   | 30       |
| Temporary           | Appointments    | 0    | 0    | 0        |
| Contract of Service | Contracts       | 15   | 14   | (1)      |

In 2020, the hiring of personnel with permanent appointment increased by thirty (30) while hiring of personnel with Contract of Service status decreased by one (1), as compared with 2019.

## II. RENEWAL OF EMPLOYMENT

| STATUS              | ITEMS PROCESSED | 2019 | 2020 | VARIANCE |
|---------------------|-----------------|------|------|----------|
| Contract of Service | Contracts       | 59   | 58   | (1)      |

The number of Contract of Service personnel increased by one (1) in 2020 compared to 2019.

## III. PERSONNEL MOVEMENTS

| STATUS                                    | NO. OF APPOINTMENTS |      | Variance |
|-------------------------------------------|---------------------|------|----------|
|                                           | 2019                | 2020 |          |
| Promotion – Permanent                     | 1                   | 16   | 15       |
| Promotion – Temporary (in nature)         | 0                   | 0    | -        |
| Permanent - Transfer                      | 0                   | 2    | 2        |
| Temporary Status to Permanent             | 0                   | 0    | -        |
| Contractual to Permanent                  | 0                   | 0    | -        |
| <i>Contract of Service to Permanent</i>   | 0                   | 12   | 12       |
| <i>Contract of Service to Contractual</i> | 0                   | 0    | -        |
| Project-Based to Permanent                | 0                   | 1    | 1        |
| Project-Based to Temporary                | 0                   | 0    | -        |

The table shows that in 2020, sixteen (16) employees were promoted to permanent; one (1) employee transferred from another agency; one (1) employee transferred from one department to another; twelve (12) contract of service personnel had their status changed to permanent; and one (1) project-based personnel had his status changed to permanent.



#### IV. SEPARATION FROM THE SERVICE

| DESCRIPTION                                                    | NUMBER OF EMPLOYEES |      | Variance |
|----------------------------------------------------------------|---------------------|------|----------|
|                                                                | 2019                | 2020 |          |
| Death                                                          | 0                   | 0    | 0        |
| Dropped from the Rolls                                         | 0                   | 0    | 0        |
| End of Contract                                                | 1                   | 4    | 3        |
| Termination of Temporary Appointment                           | 0                   | 0    | 0        |
| Retirement                                                     | 2                   | 7    | 5        |
| Resignation ( <i>Permanent</i> )                               | 5                   | 2    | (3)      |
| Resignation ( <i>Contract of Service &amp; Project-Based</i> ) | 8                   | 4    | (4)      |
| Transfer to Another Agency                                     | 1                   | 1    | 0        |

The table above shows that in 2020, the HR Division was able to process seven (7) retirement, two (2) resignations of permanent employee, four (4) resignations of contract of service, one (1) transfer to another agency and four (4) end of contract.

| REASONS FOR LEAVING                       | 2020      | PERCENTAGE  |
|-------------------------------------------|-----------|-------------|
| Higher pay                                | 1         | 10%         |
| Improved work life balance                | 0         | -           |
| Career Change                             | 1         | 10%         |
| Agency instability                        | 0         | -           |
| Family and/or personal reasons            | 1         | 10%         |
| <i>Conflict with other employees</i>      | 0         | -           |
| <i>Conflict with supervisor / manager</i> | 0         | -           |
| Better career opportunity                 | 4         | 40%         |
| Closer to home                            | 1         | 10%         |
| Better Benefits                           | 1         | 10%         |
| Other                                     | 1         | 10%         |
| <b>Total</b>                              | <b>10</b> | <b>100%</b> |

The table above shows that out of six (6) personnel who resigned, majority of them are looking for a better career opportunity outside BCWD.

#### PRODUCTIVITY INDEX

BCWD Staff Productivity Index per Active Water Service Connections with the standard ratio of 1 employee per 120 connections (1:120) as determined by the Local Water Utilities Administration and the Department of Budget and Management.

## PRODUCTIVITY INDEX

Based on the Staff Productivity Index per Active Water Service Connections with the standard ratio of 1 employee per 120 connections (1:120) as determined by the Local Water Utilities Administration and the Department of Budget and Management, it shows that the District is still understaffed. As of December 31, 2018 with **208** employees, the number of service connections per **employee ratio is 1:407**, thus with a variance of **199** lacking personnel as indicated in the table above.

### Staff Productivity Index

*Based on Active Water Service Connections  
(from 1995 to December 31, 2020)*

| Year        | No. of Active Connections | Existing No. of Personnel | Staff Productivity Index<br>(1 staff per 120 connections) | Variance   |
|-------------|---------------------------|---------------------------|-----------------------------------------------------------|------------|
| 1995        | 13,296                    | 116                       | 111                                                       | (5)        |
| 1996        | 14,205                    | 112                       | 118                                                       | 6          |
| 1997        | 14,903                    | 137                       | 124                                                       | (13)       |
| 1998        | 15,779                    | 117                       | 131                                                       | 14         |
| 1999        | 17,376                    | 121                       | 145                                                       | 24         |
| 2000        | 19,020                    | 121                       | 159                                                       | 38         |
| 2001        | 20,331                    | 130                       | 169                                                       | 39         |
| 2002        | 21,156                    | 133                       | 176                                                       | 43         |
| 2003        | 23,163                    | 132                       | 193                                                       | 61         |
| 2004        | 25,139                    | 137                       | 209                                                       | 72         |
| 2005        | 27,560                    | 141                       | 230                                                       | 89         |
| 2006        | 28,892                    | 131                       | 241                                                       | 110        |
| 2007        | 30,273                    | 131                       | 252                                                       | 121        |
| 2008        | 31,972                    | 140                       | 266                                                       | 126        |
| 2009        | 32,255                    | 150                       | 269                                                       | 119        |
| 2010        | 33,456                    | 154                       | 279                                                       | 125        |
| 2011        | 34,285                    | 168                       | 286                                                       | 118        |
| 2012        | 35,726                    | 167                       | 298                                                       | 131        |
| 2013        | 37,703                    | 176                       | 314                                                       | 138        |
| 2014        | 39,435                    | 179                       | 329                                                       | 150        |
| 2015        | 40,770                    | 194                       | 340                                                       | 146        |
| 2016        | 43,524                    | 196                       | 363                                                       | 167        |
| 2017        | 45,851                    | 203                       | 382                                                       | 179        |
| <b>2018</b> | <b>48,815</b>             | <b>208</b>                | <b>407</b>                                                | <b>199</b> |
| 2019        | 51,908                    | 214                       | 433                                                       | 219        |
| <b>2020</b> | <b>53,616</b>             | <b>217</b>                | <b>447</b>                                                | <b>230</b> |

Based on the Staff Productivity Index per Active Water Service Connections with the standard ratio of 1 employee per 120 connections (1:120) as determined by the Local Water Utilities Administration and the Department of Budget and Management, it shows that the District is still understaffed. As of December 31, 2020 with 217 personnel, the number of service connections per employee ratio is 1:447, thus with a variance of 230 lacking personnel as indicated in the table above.

# PROCUREMENT SERVICES

Procurement is one of the support services critical to BCWD operation. When procurement system could not make deliveries on time it can have a “domino” effect in the operation. For instance, if deliveries of supplies, materials and equipment are delayed a particular work or project consequently cannot go on and that completion is eventually delayed. Unfortunately, a delayed project costs as much implied losses and other setbacks which are detrimental to operation, hence, it is of prime importance to have a proactive procurement system.

BCWD has no control over the circumstances surrounding each procurement activity, if a supplier defaulted, remedial and counter measure are laid to safeguard the interest of the water district, penalties are imposed and even blacklisting of suppliers when necessary.

BCWD adheres to the guidelines of procurement in the government as a Government Owned & Controlled Corporation (GOCC) outlined in R.A. 9184 implementing rules and regulation. The said procurement Act so provides that all procurement should be within the approved budget of the procuring entity and must be in the Annual Procurement Plan (APP). The guidelines imposed competitive bidding as the general method of procurement; however, there are exemptions, as indicated in Article IV-Section 10 and Article XVI of the said Act. One of the alternative methods of procurement used by the water district is “Shopping” which requires the submission of at least three (3) quotations for readily available off-the-shelf goods or ordinary/regular equipment.

## SHOPPING & SMALL VALUE PROCUREMENT

For small value procurement, twenty-six (26) working-processing days are required, from receipt of approved purchase/job request from different departments up to issuance of approved purchase/job order excluding delivery time.

| Items Processed                       |      |      | 2019 | 2020 | Variance |
|---------------------------------------|------|------|------|------|----------|
| Purchase Requests                     |      |      | 1325 | 1124 | (201)    |
| Job Requests                          |      |      | 366  | 344  | (22)     |
| Abstracts of Price Quotations         |      |      | 464  | 428  | (36)     |
| Request for Price Quotations          |      |      | 1392 | 1371 | (21)     |
| Purchase Orders                       |      |      | 928  | 735  | (193)    |
| Job Orders                            |      |      | 254  | 298  | 44       |
| Budget Utilization Requests           |      |      | 664  | 492  | (172)    |
| Certificate of Acceptance             |      |      | 832  | 516  | (316)    |
| Billing Statements ( <i>for BUR</i> ) |      |      | 664  | 492  | (172)    |
| Suppliers ( <i>Local</i> )            |      |      | 165  | 101  | (64)     |
| Suppliers ( <i>Out of Town</i> )      |      |      | 130  | 38   | (92)     |
| BAC Resolutions Submitted             |      |      | 7    | 10   | 3        |
| Contracts Prepared                    | 2019 | 2020 |      |      |          |
| *Regular Procurement                  | 8    | 9    | 14   | 16   | 2        |
| *Bidding                              | 6    | 7    |      |      |          |

## Public Bidding

Public Bidding is the general mode of procurement mandated in all government-owned and controlled corporations (GOCCs) where BCWD belongs to. For 2020, the following projects were procured through public bidding.

|   | PARTICULARS                                                                                                                                                                                                           | AWARDED TO                     | A B C     | CONTRACT PRICE | MODE OF PROCUREMENT | ISSUANCE OF NOA   | CONTRACT SIGNING  | REMARKS            |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------|----------------|---------------------|-------------------|-------------------|--------------------|
| 1 | Package 1-2020: Supply and Delivery of Gas Chlorine Sodium Hypochlorite and Calcium Hypochlorite                                                                                                                      | Mabuhay Vinyl Corporation      | 3,698,000 | 3,698,000      | Public Bidding      | February 24, 2020 | March 13, 2020    | Awarded            |
| 2 | Package 2-2020: Procurement of Fuel for the year 2020                                                                                                                                                                 | Caraga Fuel Distributor, Inc.  | 2,981,558 | 2,554,466      | Public Bidding      | March 16, 2020    | May 11, 2020      | Awarded            |
| 3 | Package 3-2020: Procurement of Vehicle Rental Services with Tracker (Global Positioning System) for the year 2020                                                                                                     | Visa Transport Vehicle         | 4,297,680 | 4,297,044      | Public Bidding      | August 10, 2020   | August 19, 2020   | Awarded            |
| 4 | Package 04-2020: Supply, Delivery and Commissioning of One (1) unit Engine-Driven Welding Machine/ Generator - (Re-Bidding)                                                                                           |                                | 1,800,000 |                | Public Bidding      |                   |                   | Failure of Bidding |
| 5 | Package 5-2020: Supply, Delivery, Testing and Commissioning of One (1) unit Global Navigation Satellite Systems Real-Time Kinematic (GNSSRTK) including 1 Base + 1 Rover + Controller + 1 External Radio (Re-bidding) | Geotech Mercantile Corporation | 1,400,000 | 1,279,500      | Public Bidding      | December 11, 2020 | December 29, 2020 | Awarded            |
| 6 | Package 6-2020: Supply and Delivery of Various Brass Fittings                                                                                                                                                         | VC Garcia Industrial Corp.     | 5,758,357 | 5,664,590      | Public Bidding      | November 3, 2020  | November 13, 2020 | Awarded            |
| 7 | Package 7-2020: Supply and Delivery of Black High-Density Polyethylene (HDPE) Pipes                                                                                                                                   | Jhaycor Industries, Inc.       | 1,193,300 | 1,140,068      | Public Bidding      | October 29, 2020  | November 18, 2020 | Awarded            |
| 8 | Package 8-2020: Supply and Delivery of Various Plastic Fittings                                                                                                                                                       | FANM Enterprises               | 1,658,970 | 1,575,618      | Public Bidding      | November 10, 2020 | December 3, 2020  | (1)                |

## LOGISTICS SUPPORT

Pro-active support services are also critical to logistics system affecting the whole operation. BCWD ensures that safety and security controls are in place for which 22 security personnel are outsourced to secure various major structures and facilities of the water district. A well maintained and clean office building gives comfort and conducive working environment so do with the well-kept and maintained transport vehicles ferrying all operation and maintenance teams to their respective field assignments safely. This is how general services support activities interrelate towards an effective logistics system.

The succeeding table show-cased the general services activities in 2020 which contribute to good logistics performance of BCWD.

| PARTICULARS / ACTIVITY                                                                                                           | Remarks / Unit/ No. |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>Outsourced Services:</b>                                                                                                      | 13,296              |
| • Security Personnel (guards)                                                                                                    | 14,205              |
| • Drivers – rented light vehicles with GPS                                                                                       | 14,903              |
| • Comfac Corporation (preventive maintenance – uninterrupted power supply for computers)                                         | 15,779              |
| • E&E Appliance (preventive maintenance air-conditioning system)                                                                 | 17,376              |
| <b>Building &amp; appurtenances improvement:</b>                                                                                 | 19,020              |
| • Supply & Rental of Equipment for Transport of Backfilling materials from BCWD ADMIN Building to Pump Station 1 (14 truckloads) | 20,331              |
| • Relocation of 2 outdoor Aircon units from rooftop to canopy                                                                    | 21,156              |
| • Ceiling works, masonry works, concrete works and relocation of main doors of electrical room and NRW Bodega.                   | 23,163              |
| • Demolition of skylight at roof deck & Re-concreting of roof deck slab                                                          | 25,139              |
| • Conduct of disinfection of BCWD ADMIN Building and its premises                                                                | 27,560              |
| • Relocation of 2 units Aircon and installation of additional seventy feet tubing                                                | 28,892              |
| • ADMIN Building and Ground floor renovation and construction of three (3) storey building extension                             | 30,273              |
| <b>Transport Equipment Repairs:</b>                                                                                              | 31,972              |
| • Mini Dump truck - replace of cowl and general body repair – including painting & electrical                                    | 32,255              |
| • Canter - Replace, align, welding of front flooring, stepboard, wheelbox & door port hinges.                                    | 33,456              |
| • Toyota Hi-Ace Van – repair replacement of various parts                                                                        | 34,285              |

## PRE-AUDIT OF TRANSACTION DOCUMENTS

Pre-audit was conducted daily on transaction documents before these are paid for and recorded. Transactions with lacking documents are returned to forwarding unit until the noted deficiencies are complied with.

As a declared policy that all resources of the government are managed, expended and utilized in accordance with laws and regulations, IAD conducted inspection on supplies/materials/equipment (*S/M/E*) for items amounting to ₱50,000.00 below upon receipt of Inspection Requests from the Property and Materials Management Division (*PMMD*) and Letter Requests from the departments.

Monthly surprise cash count/examination has been performed to the Accountable Officers including Revolving Fund Custodians of Petty Cash Fund and Working Fund to check if the cash in their custody actually existed, items presented were viable and cash balances surrendered were correctly recorded.

## INTERNAL QUALITY AUDIT

BCWD is an ISO certified passing the standard requirements of **ISO 9001:2015 Quality Management System. For 2020**, it maintained its certification after meeting all the standard requirements by passing through the certifying body's external audit.

# FINANCIAL PERFORMANCE HIGHLIGHTS

Profit and non-profit oriented organizations used accounting tools to measure the result of their respective operations. How much they earn or loss and grow are seen in their financial performances which are communicated through the financial statements.

BCWD operates as a Government-Owned and Controlled Corporation (GOCC), however, receiving no subsidies from the national government or from any foundation and non-government organizations. It is self-liquidating and as such it depends solely from the surplus generated from its operation.

## RESULT OF OPERATION

### BUTUAN CITY WATER DISTRICT DETAILED STATEMENT OF COMPREHENSIVE INCOME (ALL FUNDS) FOR THE YEAR ENDED DECEMBER 31, 2020

|                                                                        | 2020                  | 2019                  |
|------------------------------------------------------------------------|-----------------------|-----------------------|
| <b>INCOME</b>                                                          |                       |                       |
| Service and Business Income                                            |                       |                       |
| Business Income                                                        |                       |                       |
| Total Business Income                                                  | 398,474,050.14        | 394,561,341.90        |
| Total Service and Business Income                                      | 398,474,050.14        | 394,561,341.90        |
| Other Non-operating Income                                             |                       |                       |
| Miscellaneous Income                                                   |                       |                       |
| Total Miscellaneous Income                                             | 10,752,570.71         | 7,413,761.37          |
| Total Other Non-operating Income                                       | 10,752,570.71         | 7,413,761.37          |
| <b>Total Income</b>                                                    | <b>409,226,620.85</b> | <b>401,975,103.27</b> |
| <b>EXPENSES</b>                                                        |                       |                       |
| <b>Personnel Services</b>                                              |                       |                       |
| <b>Salaries and Wages</b>                                              |                       |                       |
| Salaries and Wages- Regular                                            | 48,393,108.18         | 44,087,957.40         |
| <b>Total Salaries and Wages</b>                                        | <b>48,393,108.18</b>  | <b>44,087,957.40</b>  |
| Other Compensation                                                     |                       |                       |
| Total Other Compensation                                               | 23,015,413.06         | 25,551,998.35         |
| Personnel Benefit Contributions                                        |                       |                       |
| Total Personnel Benefit Contributions                                  | 6,681,948.09          | 6,236,065.13          |
| Other Personnel Benefits                                               |                       |                       |
| Other Personnel Benefits                                               | 4,561,261.06          | 3,666,329.80          |
| <b>Total Personnel Services</b>                                        | <b>82,651,730.39</b>  | <b>79,542,350.68</b>  |
| Total Maintenance and Other Operating Expenses                         | 233,979,812.76        | 225,305,128.09        |
| Financial Expenses                                                     |                       |                       |
| Total Financial Expenses                                               | 28,978,048.15         | 30,967,796.86         |
| Non-Cash Expenses                                                      |                       |                       |
| Total Non-Cash Expenses                                                | 60,793,408.77         | 61,509,963.70         |
| <b>Total Expenses</b>                                                  | <b>406,403,000.07</b> | <b>397,325,239.33</b> |
| <b>Profit/ (Loss) Before Tax</b>                                       | <b>2,823,620.78</b>   | <b>4,649,863.94</b>   |
| <b>Income Tax Expense/ (Benefit)</b>                                   | -                     | -                     |
| <b>Profit/ (Loss) After Tax</b>                                        | <b>2,823,620.78</b>   | <b>4,649,863.94</b>   |
| Net Assistance/ Subsidy/ (Financial Assistance/ Subsidy/ Contribution) | -                     | -                     |
| <b>Net Income/ (Loss)</b>                                              | <b>2,823,620.78</b>   | <b>4,649,863.94</b>   |
| <b>Other Comprehensive/ (Loss) for the Period</b>                      | -                     | -                     |
| <b>Comprehensive Income/ (Loss)</b>                                    | <b>2,823,620.78</b>   | <b>4,649,863.94</b>   |

**BUTUAN CITY WATER DISTRICT**  
**DETAILED STATEMENT OF FINANCIAL POSITION**  
AS AT DECEMBER 31, 2020

|                                       | 2020                    | 2019                    |
|---------------------------------------|-------------------------|-------------------------|
| <b>Current Assets</b>                 |                         |                         |
| Cash and Cash Equivalents             | 89,621,176.85           | 87,464,676.73           |
| Cash on Hand                          | 1,806,496.76            | 66,257,294.90           |
| Cash in Bank- Local Currency          | 87,814,680.09           | 21,207,381.83           |
| Receivables                           | 60,920,899.57           | 44,037,582.66           |
| Inventories                           | 29,450,919.21           | 38,069,883.17           |
| Other Current Assets                  | 3,715,018.13            | 2,757,817.43            |
| <b>Total Current Assets</b>           | <b>183,708,013.76</b>   | <b>172,329,959.99</b>   |
| Noncurrent Assets                     |                         |                         |
| <b>Investments</b>                    | <b>66,580,522.22</b>    | <b>88,412,925.58</b>    |
| <b>Receivables</b>                    | <b>11,860,989.35</b>    | <b>14,217,588.84</b>    |
| <b>Property, Plant and Equipment</b>  | <b>891,269,698.65</b>   | <b>935,118,146.72</b>   |
| <b>Buildings and Other Structures</b> | <b>72,711,456.84</b>    | <b>72,695,762.44</b>    |
| Machinery and Equipment               | 63,505,305.50           | 77,677,935.56           |
| <b>Transportation Equipment</b>       | <b>5,315,516.07</b>     | <b>6,832,508.72</b>     |
| Furniture, Fixtures and Books         | 106,735.10              | 148,523.58              |
| Construction in Progress              | 44,318,750.12           | 42,192,546.43           |
| Intangible Assets                     | 46,948.80               | 94,718.64               |
| Other Noncurrent Assets               | 18,149,952.13           | 18,134,319.01           |
| <b>Total Noncurrent Assets</b>        | <b>987,908,111.15</b>   | <b>1,055,977,698.79</b> |
| <b>Total Assets</b>                   | <b>1171616124.91</b>    | <b>1228307658.78</b>    |
|                                       | <b>LIABILITIES</b>      |                         |
| Current Liabilities                   |                         |                         |
| Financial Liabilities                 | 105,557,118.01          | 85,390,247.50           |
| Payables                              | 22,814,568.41           | 35,141,862.20           |
| Loans Payable                         | 81,706,634.12           | 49,292,633.00           |
| Other Financial Liabilities           | 1,035,915.48            | 955,752.30              |
| Inter-agency Payables                 | 58,843,727.25           | 3,768,511.87            |
| Inter-agency Payables                 | 58,843,727.25           | 3,768,511.87            |
| Trust Liabilities                     | 31,369,410.01           | 66,132,616.34           |
| Deferred Credits/ Unearned Income     | 640,273.12              | 453,904.43              |
| Provisions                            | 6,690,728.21            | 6,197,693.74            |
| Other Payables                        | 2,545,795.39            | 1,386,118.06            |
| <b>Total Current Liabilities</b>      | <b>205,647,051.99</b>   | <b>163,329,091.94</b>   |
| Noncurrent Liabilities                |                         |                         |
| Financial Liabilities                 | 440,088,099.71          | 504,610,758.95          |
| Loans Payable                         | 440,088,099.71          | 504,610,758.95          |
| Trust Liabilities                     | 471,438.28              | 25,657,668.37           |
| Deferred Credits/ Unearned Income     | 3,427,525.97            | 3,908,162.57            |
| <b>Total Noncurrent Liabilities</b>   | <b>443,987,063.96</b>   | <b>534,176,589.89</b>   |
| <b>Total Liabilities</b>              | <b>649,634,115.95</b>   | <b>697,505,681.83</b>   |
|                                       | <b>EQUITY</b>           |                         |
| Government Equity                     | 17,914,209.59           | 17,914,209.59           |
| Retained Earnings/ (Deficit)          | 504,067,799.37          | 512,887,767.36          |
| Retained Earnings/ (Deficit)          | 504,067,799.37          | 512,887,767.36          |
| <b>Total Equity</b>                   | <b>521,982,008.96</b>   | <b>530,801,976.95</b>   |
| <b>Total Equity</b>                   | <b>521,982,008.96</b>   | <b>530,801,976.95</b>   |
| <b>Total Liabilities and Equity</b>   | <b>1,171,616,124.91</b> | <b>1,228,307,658.78</b> |

The Covid-19 pandemic has really affected the operation of BCWD as evident in reduced earnings and downtrend in Equity figures in comparison with last year.



# COMMUNITY RELATIONS & EXTERNAL AFFAIRS DIVISION

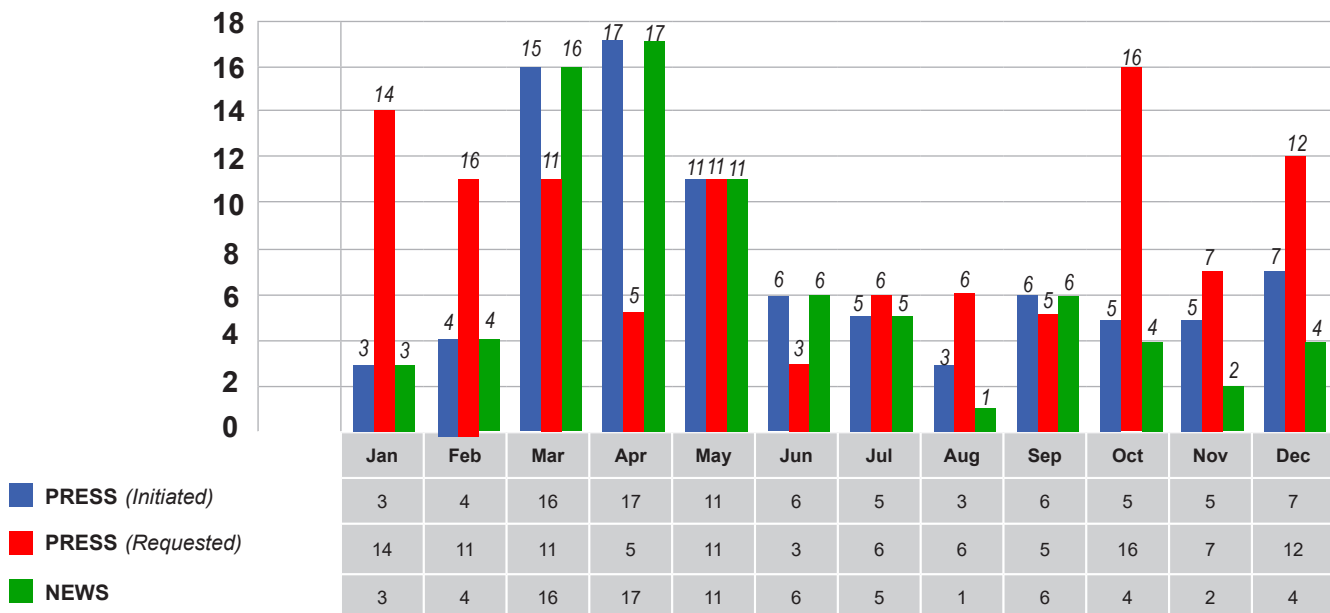
The community of stakeholders of water service utility are the most important element of its operation because they are the reasons why water districts existed. The success of every advocacy depends upon on the awareness and acceptance of the community where water districts operate. Getting them aware and well informed or even involved about everything which relates to the advocacies, programs and activities of the water district is half way to success and how to reach them out is another half way.

## INFORMATION DRIVE

BCWD gets through the broadcast and television media to reach out the community to disseminate press and news releases pertaining to water service interruptions, activities and programs of the water district. A total of 195 and 22 press and news releases, respectively, graphically presented below.

Hot issues relating to BCWD operation that the media wanted to bring to its listeners on air get through live interviews with BCWD's spoke person and with the General Manager (GM) himself. a total of 32 hook-in-live and recorded interviews – 7 for TV, 22 for Broadcast and 3 for print media.

**Press and News Releases**  
*January - December 2017*



### Press Releases

- 216 stories / announcements (104 initiated press releases and 112 requested press releases) were released compared to last year's 202.

### News Releases

- 79 news/feature stories were released as of end of December compared to last year's 52.

## NEWSLETTERS, BROCHURES, LEAFLETS & OTHER INFORMATIVE MATERIALS

BCWD launched its very own corporate journal dubbed “Breakwater” many years back. The publication is on quarterly basis which captures the highlights of BCWD performance, programs and pertinent issues for the quarter. Adopt-a-Forest is brochure in support of the National Greening Program with the ultimate objective of developing the Taguibo Watershed Forest Reserve, an advocacy of the water district. Some other leaflets are designed to make the stakeholders aware about their local water utility, water conservation tips, news bits and other subjects of interest relating to BCWD

### Production of Informative Print Materials

| DESCRIPTION                                            | NO. OF COPIES |
|--------------------------------------------------------|---------------|
| Breakwater                                             | 1,000         |
| Breakwater News bit (vol 6 – No.1-9)                   | 9,000         |
| Adopt-a-Forest                                         | 600           |
| Community Water Conservation                           | 1,000         |
| BCWD in 60 seconds                                     | 1,500         |
| From Source to Taps                                    | 1,500         |
| Water Saving Tips                                      | 11,500        |
| BCWD Best Practice During Covid-19 (Adapting Covid-19) | 500           |
| BCWD SM Bill Payment                                   | 2,000         |
| BCWD Partners with ECPay Bills Payment                 | 2,000         |
| BCWD advisory on Covid-19 (Avoid Congestion)           | 1,000         |
| Covid-19 Advisory                                      | 1,000         |
| BCWD Advisory (collecting centers)                     | 1,000         |
| Covid-19 – Office Closure                              | 1,000         |
| BCWD Advisory on Covid-19 (extends payment period)     | 1,000         |
| BCWD Advisory Covid -19 (Pasabot)                      | 1,000         |
| Customer Survey Form                                   | 1,000         |
| BCWD New Collection Schedule                           | 2,000         |
| BCWD Advisory on Covid-19 (for building owners)        | 2,000         |
| BCWD Advisory on Covid-19 (on the safe use of alcohol) | 1,000         |
| BCWD Advisory for Veterans’ Bank                       | 1,000         |
| Declaration Form – Covid-19                            | 2,000         |

**INSTITUTIONAL ACTIVITIES** – One way of bringing the water district closer to the communities is done by getting them involved with the activities designed to give them awareness of the importance of water through the conduct of local contests theming with the current issues and water saving drive.

## LOCAL CONTESTS

### \* 16<sup>TH</sup> PHOTO CONTEST

- The 16<sup>th</sup> Photo Contest on-location shooting was conducted last March 11, 2020 at Sitio Tagkiling, Brgy. Anticala. This year's Photo Contest was open to three levels namely, elementary, jr. high school and sr. high school. A total of thirteen (13) elementary pupils wherein seven (7) are female and six (6) are male; fourteen (14) jr. high school with ten (10) female and four (4) male; and thirteen (13) sr. high school students with six (6) female and seven (7) male, participated in the said contest.



### \* 31<sup>ST</sup> ON-THE-SPOT POSTER MAKING CONTEST

- The 31<sup>st</sup> On-the-Spot Poster Making Contest was held last March 12, 2020 at the BCWD Training Hall with the theme: "Preserve, Conserve... Deserve Ko ang Fight for Water" for the Elementary and "ACT 4 H2O ... Activate the Cause and Time 4 Water." for the Junior High School level. Contest started at 9:00 am for the elementary level and 2:00 pm for the junior high school level. A total of 21 elementary pupils wherein ten (10) were female and eleven (11) were male; and 20 junior high school students with seven (7) female and thirteen (13) male, participated in the said contest.



### \* 1<sup>ST</sup> QUARTER WATER QUIZ SHOW

The 1st set of Quarterly Water Quiz Show was conducted last January 29, 2020, 9:00 a.m. for the elementary level and 2:00 p.m. for the junior high school level at the BCWD Training Hall. A total of 24 elementary and 21 junior high school students participated in the said contest. Among the 20 elementary pupils, 16 were female and 8 were male. For the junior high school level, 10 were female and 11 were male.



## WATER EDUCATION AND ADVOCACY

### BISITA ESKWELA

The Bisita Eskwela for CY 2020 was conducted in a different format starting the 2<sup>nd</sup> quarter due to the restrictions brought about by the COVID-19 pandemic. The implementation of the 2<sup>nd</sup> to 4<sup>th</sup> quarter Bisita Eskwela were limited to distribution of materials for information dissemination and to assist the schools in production of modules for online and modular classes and only by request from schools.



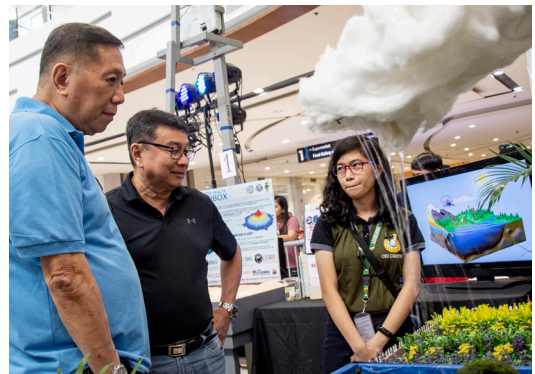
### WATER DISTRICT WEEK

Butuan City Water District (BCWD) in cooperation with the Philippine Association of Water Districts (PAWD) observed the celebration of Water District Week. For 2020, BCWD conducted once again the Community Water Conservation Festival January 27 and 31, 2020. The celebration started with the conduct of the Watershed Symposium last January 21-22, 2020 also in consonance with the celebration of the LGU Butuan's Watershed Consciousness Week.



#### A. FESTIVAL BOOTH EXHIBIT

The BCWD conducted the Booth Exhibit in the morning of January 31, 2020 at the Robinson's Mall Butuan Atrium. The Booth Exhibit is a contest for the Sr. High School and tertiary level. Each College or University is given an area where they can create a booth depicting the theme or topic provided to them. A total of 3 colleges and/or universities participated in the said activity.



#### A. FESTIVAL VARIETY SHOW

To cap off the weeklong celebration, BCWD conducted the Festival Variety Show in the afternoon of January 31, 2020 at the Robinson's Mall Butuan Atrium. The Variety Show is intended for Jr. and Senior High School Students in Butuan City.



## A. FILM SHOWING

The Film Showing showcased the Water District through the documentary depicting the Butuan City Water District and the Taguibo River Watershed Forest Reserve. Said activity was conducted at 1:30PM at the Robinson's Mall Butuan – New Atrium with a total of 107 participants, 32 of which were male and 75 were female.

As part of the District's water advocacy to our youth, an invitation was sent to two elementary schools, two secondary level schools to view the said documentary. After the viewing, a short question and answer portion was conducted to gauge whether the students have learned something from the movie.



## WATERSHED CONCERNS

### WATERSHED COMMUNITY SYMPOSIUM

#### 1<sup>ST</sup> WATERSHED COMMUNITY SYMPOSIUM

As part of the celebration of the Water District Week every last full week of January and the City Ordained Watershed Consciousness Week every 3rd week of January, the Butuan City Water District (BCWD) kicked off its quarterly Watershed Community Symposium last January 21 and 22, 2020. A total of 181 participated in the said activity. Of the 181, 102 were female and 79 were male.



**For this quarter, the following attended as speakers of the symposium:**

#### - Department of Environment and Natural Resources (DENR) Caraga:

- Jonathan Budlat (Forestry Laws);
- Assisted by Juliebee Cabarles;

#### - Environmental Management Bureau (EMB) Caraga:

- Cymagine Donna A. Dela Rosa (WQMA);
- Ailyn dela Peña (Water Quality);

#### - City ENRO:

- Ms. Bernardita Tecson (Solid Waste and Other SP Ordinances related to environmental concerns);

#### - DENR CENRO – Nasipit:

- Rosemarie Alas Adobas (*Importance of Tree*);
- Margie P. Guliman (*Importance of Watershed*);

**Topics discussed during the said symposium were the following:**

**For Sitio Dugyaman, Brgy. Anticala:**

- Solid Waste Management
- SP Ordinances related to Environmental Concerns
- WQMA
- Water Quality
- Importance of Trees
- Forest Protection Laws

**For Barangay Paining:**

- Solid Waste Management
- SP Ordinances Related to Environmental Concerns
- Importance of Watershed
- Forest Protection Laws



# E P I L O G U E

BCWD's performance has been affected by the economic downturn caused by COVID-19 pandemic. However, there is one factor that slowed down its efficiency and performance and that is the perennial problem on non-revenue water. The pipeline network is almost half a century old and evidently overtaken by wear and tear due the passage of time. Its pipeline system need to be rehabilitated if the district has to extend its operation for another decade – no amount of strategy and control can replace rehabilitation since the water pipelines are bleeding daily underneath. The DMAs are ineffective given the scenario of dilapidated system.

Even if with the initiative of water rates adjustments can only alleviate BCWD's financial health momentarily – the revenue stream would soon be overtaken with the profound effect of inefficiency of wasted water known as non-revenue water. The management has taken up measures like appropriating funds for the control and eventually reduce NRW to an acceptable level. Since rehabilitation of the entire pipelines system is very costly BCWD might be mulling an options either through capital financing or seek a joint venture partner under the auspices of Public-Private Partnership (*PPP*).

