



2021 ANNUAL REPORT

PERFORMANCE HIGHLIGHTS

WATER PRODUCTION

The total volume of water supplied in the system for the year CY 2021 was **18,851,680.00 m³**. This comprised of **15,265,332 m³** (80.96%) surface water (TASC/Bulk Water) and **3,586,348 m³** (19.04%) groundwater (Pumping Facilities). **169,926 m³** (0.90%) were given free of charge to Pianing, Brgy. Anticala.

A total of **Php170,809,822.11** was paid to TASC representing payment for water volume supplied to BCWD in 2021.

In terms of water production operating hours, TASC (Surface Water) had a total operating hours of **8,533** while the **BCWD pump stations** had **7,885** hours.

Month	Production CY 2021				Hrs. of Operation	
	TASC (cu.m.)	NET COST (PHP)	VOLUME FROM PIANING, ANTICALA (FREE WATER) (CU.M.)	4 PS (1,14,15 &17) (CU.M.)	TASC (HRS)	4 PS (1,14,15 &17) (HRS)
JANUARY	1,319,463	16,247,000.58	13,994	301,403	744	525
FEBRUARY	1,192,225	14,638,721.08	12,970	278,625	672	617
MARCH	1,318,565	14,239,951.32	14,385	290,591	744	672
APRIL	1,275,488	15,727,364.41	14,389	327,135	744	702
MAY	1,318,790	16,241,710.70	14,765	320,422	744	673
JUNE	1,278,781	15,737,641.47	14,494	321,404	720	677
JULY	1,318,791	15,516,641.67	13,732	304,910	744	715
AUGUST	1,317,935	15,510,235.55	15,459	310,716	744	746
SEPTEMBER	1,275,134	15,007,752.61	13,812	303,205	720	708
OCTOBER	1,317,654	16,232,808.93	14,576	306,053	744	686
NOVEMBER	1,275,254	15,709,993.79	15,333	299,594	720	675
DECEMBER	1,057,252		12,017	222,290	493	489
TOTAL	15,265,332.00	170,809,822.11	169,926	3,586,348	8,533	7,885

WATER RATIONING

Water distributed through water tankers to elevated barangays and waterless areas after Typhoon Odette.

SUMMARY OF WATER RATIONING ANNUAL ACCOMPLISHMENT REPORT CY 2021										
MONTH CY 2021	1ST QUARTER		2ND QUARTER		3RD QUARTER		4TH QUARTER		TOTAL	
BRGY. PINAMANCULAN/ DUMALAGAN /	NO. OF	VOLUME DELIVERED (CU.M.)	NO. OF	VOLUME DELIVERED (CU.M.)	NO. OF	VOLUME DELIVERED (CU.M.)	NO. OF	VOLUME DELIVERED (CU.M.)	NO. OF	VOLUME DELIVERED (CU.M.)

BANCASI & CITY PROPER	TRIPS		TRIPS		TRIPS		TRIPS		TRIPS	
	279	1395	300	1500	174	870	341	2616	1094	6381

Total number of trips was 1,094 with 6,381cu.m. of water supply provided to the concessionaires. Expenses incurred in the water rationing reached Php1,279,730.49, comprising cost of water, power and fuel.

NOTE:	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	TOTAL
Total Days of Water Rationing	75 DAYS	78 DAYS	45 DAYS	64 DAYS	262 DAYS
Water Rationing Expenses	Php321,348.39	Php310,611.10	Php222,778.84	Php424,992.16	Php1,279,730.49

WATER QUALITY

Ensuring water quality is by monitoring through Physical and Chemical Parameters. The result of the disinfection at the different water sources and support facilities are being checked through the collection of water samples. These samples are then analyzed at the BCWD laboratory.

Physical and Chemical Analyses

The Physical and Chemical Analyses were conducted monthly for the BCWD Water sources that included the four (4) operational pump stations, one (1) from Taguibo River taken at the TASC dam, one (1) from the supplied water after it undergone the TASC treatment, and one (1) from the product water after the chlorination process prior to the distribution lines. In the 2nd quarter, it included the monitoring from the functional reservoirs at Km. 6, Emenvil, Emily and Bit-os.

Bacteriological Analysis

For In-House Activities Instead of the required 38 sampling points by the Philippine National Standards for Drinking Water (PNSDW), BCWD conducted 47-50 sampling points spread along the distribution lines for Bacteriological Analysis conducted monthly.

Outside Client

The BCWD Water Testing Laboratory is a duly DOH Accredited Laboratory for Physical, Chemical and Bacteriological Analyses; hence, 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. The number of samples varies for it

only depends on the request and availed services from the laboratory. Mostly an increase in the number of samples took place during last quarter when the Refilling Stations availed for their renewal of business permits.

Total income for outside client analyses for the CY 2021 was **Php646,140.00**.

Chlorine Residual Monitoring

Regular monitoring of chlorine residual was conducted at various points in the water system to ensure that the water running was within the approved level of 0.3 (minimum) to 1.5 (maximum) mg/L. The Number of samples taken and analyzed for Chlorine Residual Monitoring every month passed at least 70% of the total samples taken.

ACTIVE/METERED CONNECTIONS

From the projection of 57,686, the District's active/metered connections ending December 31, 2021 have only reached to 54,794, with a variance of 2,892 connections, 1,166 of that variance came from a higher anticipated active connections beginning of the year used in the projection over the actual active connections as of December 31, 2020. It shows a higher disconnection on the last semester of 2020 and the trend continue to 2021.

NEW CONNECTIONS

In 2021, we were able to serve additional 2,557 new connections coming from 60 barangays which is 259 connections lesser than the targeted New Service Connections (NSC) for the year. The reason is that starting September 2, 2020, we temporarily suspended accepting NSC applications for the following 3 Barangays: Pinamanculan, Bancasi and Dumalagan because of low water pressure to no water experienced in the area. Also, the 2021 proposed expansion line in Brgy. Kinamlutan was not realized.

In the same year, Barangay Villa Kananga got the highest number of new service connections followed by Barangay Taguibo. Most NSCs last year can be found in the west side of the city because this is where most of the new housing projects/subdivisions are situated.

BILLED CONNECTIONS

In 2021, we had an average active connections per month of 53,992 which 99.80% or 53,883 per month were billed with an average billing of Php 34,127,767.40.

CUSTOMER-IN-ARREARS

Based on aging of account report, an average of thirty-two point fifty-three percent (32.53%) or seventeen thousand five hundred twenty-seven (17,527) billed connections are customer-in-arrears (Schedule 3 page 8). Of the 17,527, one point fifty-two percent (1.52%) or two hundred sixty-six (266) customers opted for staggered payment in settling their leakage billings in the amount of four million seventy-seven thousand six hundred

three pesos and 2/100 (Php4,077,603.02). Out of these 266 concessionaires, twenty-three (23) were able to pay in full while the remaining two hundred fifteen (243) – 149 overdue and 94 active – are still on partial payment as of December 31, 2021.

WATER SALES AND PENALTY BILLINGS

This year's water sales amounted to Php399,702,964.38 which is 4.79% higher than 2020.

In the same year, 40.99% of total water billings was subjected to 6% penalty. We were able to billed Php9,830,244.37 penalty charges for the year which was 10.78% higher than 2020.

COLLECTION ON WATER SALES AND PENALTY CHARGES

In 2021, we were able to collect the total amount of Php 417,265,310.75 from active & inactive connections which is equivalent to 101.89% of total billings for the year. It is 2.89% higher than the targeted 99%. As shown in the graph, in terms of amount December got the lowest collection due to the ravages of Typhoon Odette, which made its first landfall on December 16, 2021. BCWD operation has been greatly affected by this typhoon as the facilities of TASC which is the sole supplier of the Butuan City Water District has been severely damage while February got the highest collection.

AVERAGE MONTHLY CONSUMPTION PER CONNECTION

Average monthly consumption per connection in 2021 was 15.75 cubic meter which is 0.20 cubic meter higher compared to 2020 and 0.14 cubic meter lower compared to 2019.

2020 and 2021 has lower cubic meter consumption particularly from the Government and Commercial connections due to the quarantine restriction imposed by the Government to counter the COVID-19 pandemic which start on March of 2020.

EXPANDED SENIOR CITIZEN ACT OF 2010 (R.A. 9994)

As of December 2021, nine hundred thirty-two (932) elderly concessionaires have availed the five percent (5%) senior citizen discount (SCD) given to accounts with users aging sixty (60) years old and above whose monthly consumption does not exceed thirty (30) cubic meters. There is a slight decrease of 1.48% in the number of SCD applicants in comparison to last year's nine hundred forty-six (946).

A total amount of two hundred fourteen thousand fifty-five pesos and 46/100 (Php 214,055.46) was discounted for the whole year with an average of seventeen thousand eight hundred thirty-seven pesos and 96/100 (Php 17,837.96) per month, which is a decrease from 2020 which recorded an average of nineteen thousand four hundred eighty-five pesos and 39/100 (Php 19,485.39).

ACCOUNTS FORWARDED

In 2021, there were 256 inactive accounts forwarded to active accounts amounting to ₱1,160,695.19. Of the 256 accounts, 188 are fully paid within the year amounting to ₱301,828.87 while the remaining 68 accounts are still paying, unpaid and closed or re-forwarded to other accounts.

ACCOUNTS RECEIVABLE – inactive accounts

Accounts Receivable-inactive balances as shown in the table below was an accumulated balances of this accounts from year 1982-2021. Notices of collection have been delivered and write-off of accounts are being evaluated and finalized based on the COA requirements on write-off.

Found below is the Comparative Balances of Accounts Receivable - Inactive Accounts as of December 31, 2021;

COMPARATIVE BALANCES OF ACCOUNTS RECEIVABLE ON INACTIVE ACCOUNS					
As of December 31, 2021					
No. of Concessio naire	As of Dec. 31, 2020 Balances	No. of Concessio naire	As of Dec. 31, 2021 Balances	Collection/ Movement	Percentage of Collection
6,149	19,771,125.57	7,139	20,231,562.06	4,234,140.22	21.42%

The Account Receivable – inactive accounts have established a 20% target percentage of collection for 2022 based on the 5-year average percent of collection (2017-2021).

YEAR	COLLECTION PERCETAGE
2017	24.80%
2018	21.37%
2019	16.10%
2020	16.26%
2021	21.42%
Average Collection %	19.99%
	(99.95/5 years)

NOTICE OF COLLECTION TO INACTIVE ACCOUNTS

Letter of collection on inactive accounts with 200 up for water accounts, loans expended for PE Tube and Installation Fee were served. As of December 31, 2021 twelve thousand seven hundred ninety-five (12,795) numbers of accounts with collection notices of which seven thousand seventy-six accounts (7,076) or 55.30% has settle their account or fully

paid. One hundred seventeen accounts (117) or 0.91% with partial payment, one thousand seventy-four accounts (1,074) or 8.39% with accounts forwarded to active accounts, twenty-nine accounts (29) or 0.23% with demand letter from legal office, thirty-five accounts (35) or 0.27% with demand letter from attorney and four thousand four hundred sixty-four accounts (4,464) or 34.90% were subject for re-notice.

DISCONNECTION AND RECONNECTION OF WATER METERS

Disconnection Orders versus Reconnection (Reopen Orders)

For the year 2021, PAMD’s actual disconnected service connections reached up to 25,092. To further see the relationship of the actual disconnected service connections with regards to the actual reconnection (reopen orders) with a total of 19,227, please see the table and graph below.

Table 1

Month	Actual Disconnection/ Installation of lock	Reopen
January	1,425	1,027
February	1,334	1,001
March	2,283	1,709
April	1,807	1,432
May	1,573	1,308
June	2,746	2,575
July	2,420	2,251
August	1,989	1,849
September	2,691	2,374
October	2,764	2,565
November	2,548	2,336
December	1,512	1,372
Total	25,092	21,799

Presented by quarter:

Activity	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Total
Installation of lock	5,042	6,126	7,100	6,824	25,092
Reopen	3,737	5,315	6,474	6,273	21,799

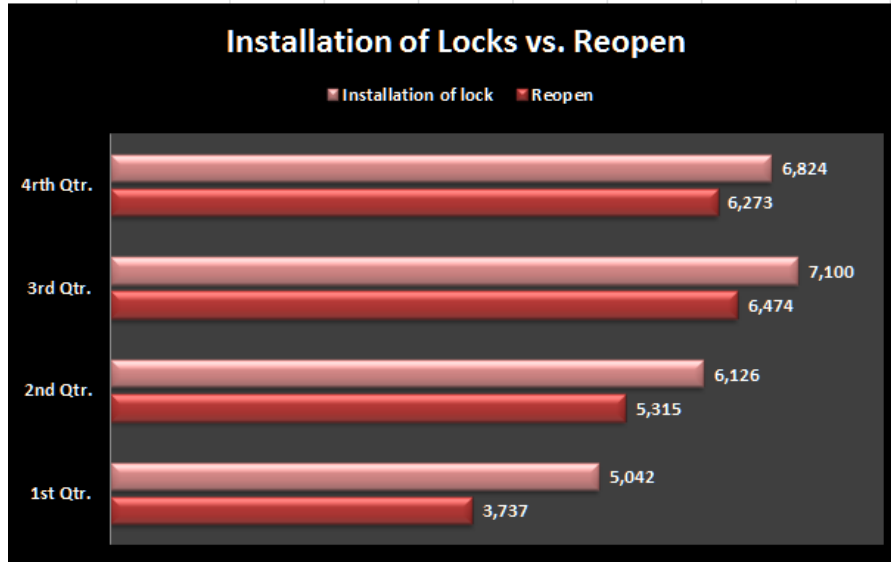


Figure 1. Comparison of Actual No. of Accounts Installed with locks from Reopened Service Connections

The above graph shows a significant relationship between the two variables and correlation coefficient (r) of the two is +0.97. The relationship between actual disconnected accounts and reopened accounts has a very strong positive correlation since the value is close to +1. So, if the disconnected account decreases, reopened accounts also decrease, and if the disconnected account increases, so do reopened accounts.

Withdrawal of Water Meters versus Reconnection (Reopen/Install Meter Orders)

The total actual withdrawn water meters for the year 2021 is 6,088 service connections while the total actual reopened/installed meters is 5,206. To further see the significance or relationship of this, the two variables should be taken into consideration. Please refer to the table and the graph below.

Table 2

Month	Actual Withdrawn Water Meters	Actual Reopened/Installed Meters
January	315	221
February	457	259
March	801	407
April	536	473
May	394	406
June	520	484
July	458	511
August	497	487
September	438	425
October	693	572
November	515	487

December	464	474
Total	6,088	5,206

Presented by quarter:

Activity	1st Qtr.	2nd Qtr.	3rd Qtr.	4rth Qtr.	Total
Withdrawn Water Meters	1,573	1,450	1,393	1,672	6,088
Reopen/Install Meter	887	1,363	1,423	1,533	5,206

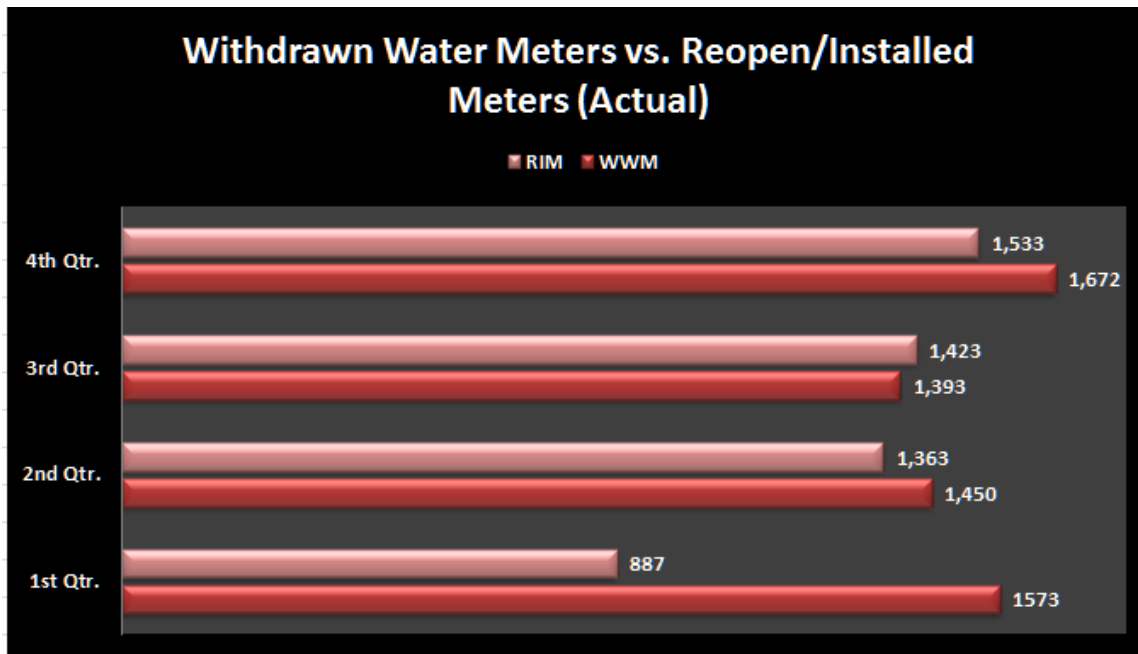


Figure 2. Comparison of Actual Withdrawn Water Meters from Actual Reopen/Installed Meter

In addition, as shown in the graph, withdrawn water meters is almost equal to the number of reopen/install meters. Hence, the graph shows a significant relationship between the two variables, correlation coefficient (r) of 0.47 means that the two variables has a positive correlation, wherein values of both variables tend to increase together. Meaning, when the number of withdrawn meter increases, the number of reopen/install meter also increases.

INFRASTRUCTURE

The projects scheduled for implementation last CY 2021 consists of installation of new lines specifically 50mmØ Black HDPE Pipes as expansion to existing distribution lines upon receiving requests from concessionaires provided that the recipient comprises only of 60 or less households. Below shows the department's target for the formulation plans and duration for its construction works and its corresponding accomplishments in terms of its efficiency.

*Preparation of Design Plan, Bill of Materials (BOM), Program of Works (POW)

Accomplished		EFFICIENCY		Variance
		Target (days)	Actual (days)	
1	Pk 2 Brgy Lumbocan	10	4	+60%
2	BIR, COA, DOH and DILG Brgy Doongan	10	2	+80%
3	Pk 4 Banate Brgy Cabcabon	10	4	+60%
4	Pk 8A Brgy Ambago	10	7	+30%
5	Brgy. Mahay (Diversion Road)	10	6	+40%
6	PK 9 A Brgy. Libertad	10	6	+40%
7	Brgy. Lemon- Antongalon (Diversion Road Area)	10	2	+80%
8	PK 3-B Brgy. Ampayon	10	7	+30%
9	Pk Gabi-C Brgy. Basag	10	6	+40%
10	PK 1-A Brgy. Taguibo	10	8	+20%
11	PK 6 Brgy. Ampayon	10	7	+30%

*Implementation of Water System Plans and Designs –
Construction in accordance with the Project's POW

Acted requests		EFFICIENCY		Variance
		Target (days)	Actual (days)	
1	Krymsonville Subdivision	15	10	+33%
2	Baan Km3 (Fronting Nissan & Mazda)	15	9	+40%
3	Pk 2 Brgy Lumbocan	15	10	+33%
4	BIR, COA, DOH and DILG Brgy Doongan	15	10	+33%
5	Pk 4 Banate Brgy Cabcabon	30	30	0%
6	Pk 8A Brgy Ambago	15	8	+47%
7	Brgy. Mahay (Diversion Road)	15	10	+33%
8	PK 9 A Brgy. Libertad	15	8	+47%
9	Brgy. Lemon- Antongalon (Diversion Road Area)	15	10	+33%
10	PK 3-B Brgy. Ampayon	15	10	+33%
11	Pk Gabi-C Brgy. Basag	15	9	+40%
12	PK 1-A Brgy. Taguibo	15	10	+33%
13	Damayan, Libertad	15	15	0%
14	PK 6 Brgy. Ampayon	15	8	+47%
15	Calot, Brgy. Villa Kananga	15	10	+33%

Cancelled / Deferred Requests		Remarks
1	Pk 4 Brgy Lemon	Requestor cannot provide excavation works due to length. Implementation was deferred.
2	B4 Sintos Subdivision Brgy. Villa Kananga	Request cancelled by requestor due to submerged excavation site.
3	Pk 6A Brgy Buhangin	Requestor cannot provide excavation works. Implementation was deferred.
4	Pk 1-B Brgy. Tiniwisan	Requestor cannot provide excavation works. Implementation was deferred.
5	Pk 5 Brgy. Doongan	Cannot proceed as the area was identified as part of private property, request was then cancelled.
6	PK 25 & 26 Brgy. Baan Km 3	Requestor cannot provide excavation works. Implementation was deferred.
7	PK 4 Booc St., Brgy. Villa Kananga	Requestor cannot provide excavation works. Implementation was deferred.

The aforementioned completed projects are based on the request received by the district from the concessionaires. Whereas areas targeted for upgrading of lines were already determined by the department which was included on the development plan for upcoming implementations. Areas for upgrading includes the pipelines along Brgy. Pianing, Brgy. Anticala & portion of Brgy. Taguibo with 6,965 l.m. length for the first year, remaining portion of Brgy. Taguibo, Brgy. Cabcabon & Brgy. Ampayon with 6,477 l.m. length for the second year and so on up to five years of scheduled upgrading of pipelines.

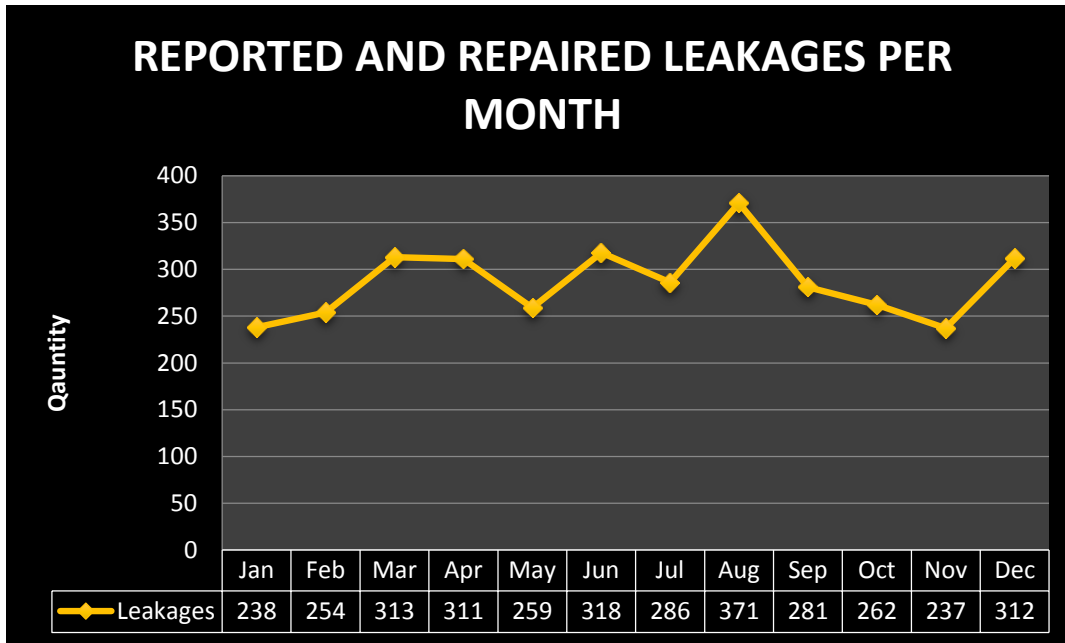
The proposed expansion of lines includes the installation of 250mm Ø pipes from Taguibo Crossing to Sumilihon as the first project, 200mmØ pipes for Cabcabon to Bobon to Banza lines as the next project and other proposed areas for expansion of lines. This will provide a wider coverage for the provision of services by the district therefore increasing the revenue proportional to the increased number of concessionaires.

MAINTENANCE

Repairs of Transmission and Distribution Lines

The Pipeline and Leakage Control Division (PLCD) initially recognizes leaking complaint / condition through leaking reports from the concessionaires / employees of BCWD, through the conduct of foot patrol occasionally during sometime at 12:00M.N. to 8:00A.M and mostly leak mainline were affected by road widening projects and drainage construction. Information acquired from these reports / activities are recorded in the BCWD Complaints System and exhibited through Maintenance Order (MO).

All MOs received in 2021 related to leakages were responded/repared by the LRT accordingly. Based on the actual description of these MO, the total number of leaking orders is 3,442.



Reported and repaired leakages per month

The breakdown of this data is elaborated below:

Quantity of leakages per classification per month

LEAKAGES IN	MONTH												TOTAL	
	JAN	FEB	MAR	APR	MAY	JUNE	JUL	AUG	SEPT	OCT	NOV	DEC		
SERVICE LINE														
Air release valve													1	1
After meter	11	8	19	21	11	15	10	7	1	8	10	9		130
Meter Stand	42	53	62	54	29	62	61	95	58	57	57	53		683
Pipeline (size of $\phi \leq 1"$)	159	169	200	199	193	211	192	250	197	181	158	234		2343
Total no. (Service Line)	212	230	281	274	233	288	263	352	256	246	225	297		3157
MAINLINE														
Pipeline (size of $\phi > 1"$)	26	24	32	37	26	30	23	19	25	16	12	15		285
Total no. (Mainline)	26	24	32	37	26	30	23	19	25	16	12	15		285
TOTAL	238	254	313	311	259	318	286	371	281	262	237	312		3442

The LRT tried to accomplish these repairs within the tolerable no. of days as specified in the citizen charter. Here is the presentation of the timeliness of their works (time is based on when the MOs were recorded in the BCWD Complaints System) consolidated according to the weight of the works (simple and complex cases).

LEAKAGES IN	TOTAL				
	W/N THE DAY	1 DAY	2 DAYS	3 DAYS	Total
SERVICE LINE					
Air release valve	1				1
After meter	90	33	7		130
Meter Stand	403	205	67		675
Pipeline (size of $\phi \leq 1''$)	1923	292	83		2298
Total no. (Service Line)					
MAINLINE					
Pipeline (size of $\phi > 1''$)	13				13
Total no. (Mainline)	13				13
TOTAL	2430	530	157		3117

Timeliness leakages were acted per classification (for Simple Cases only)

Timeliness leakages were acted per classification (for Complex Cases only)

LEAKAGES IN	COMPLEX CASES								TOTAL
	NO. OF DAYS ACTED								
	W/N THE DAY	1 DAY	2 DAYS	3 DAYS	4 DAYS	5 DAYS	6 DAYS	7 DAYS	
SERVICE LINE									
Meter Stand		1		2		3	1	1	8
Pipeline (size of $\phi \leq 1''$)	4	2	2	15	7	3	4	8	45
Total no. (Service Line)	4	3	2	17	7	6	5	9	53
MAINLINE									
Pipeline (size of $\phi > 1''$)	210	45	4	3	3	3	1	3	272
Total no. (Mainline)	210	45	4	3	3	3	1	3	272
TOTAL	214	48	6	20	10	9	6	12	325

Control/Gate Valve of Transmission/Distribution Line

Main Control Valves also known as Gate Valves are also one of the vital appurtenances of BCWD that are also maintained by PAMD every month. PAMD has prepared semi-

annual maintenance schedule for these gate valves. PAMD arranged four (4) gate valves to be maintained every month. If there were gate valves needed to be maintained and repaired not within the schedule, these were also accommodated by the department. Below is the annual accomplishment report for the repairs and maintenance of gate valves.

MONTH	QUANTITY			
	SCHEDULED	ACCOMPLISHED		
		MAINTAINED AS PER SCHEDULE	REPAIRED / MAINTAINED NOT ON SCHEDULE	TOTAL REPAIRED AND MAINTAINED
JANUARY	4	3	5	8
FEBRUARY	4		4	4
MARCH	4		14	14
APRIL	4		2	2
MAY	4		1	1
JUNE	4		1	1
JULY	4		5	5
AUGUST	4		3	3
SEPTEMBER	4		5	5
OCTOBER	4	4	2	6
NOVEMBER	4		1	1
DECEMBER	4		2	2
TOTAL	48	7	45	52

Responding to Concessionaires’ Requests

PAMD also accommodates requests from Commercial Dept. and concessionaires. These requests are Change Water Meter (CHM), Change Damaged Water Meter (CDM), Transfer Water Meter (TWM) and Transfer Cluster (TCC).

Requests from Commercial Dept. are usually CHM and TCC. Some of these CHM and TCC orders came from the water meter readers requesting to change the water meters with blurredness/moisture condition and requesting to transfer the clusters located inside private property to appropriate location. Some CHM orders are also came from the investigators/technicians where water meters are found to be stuck-up.

Requests such as CDM, CAV/CMV/DWV/DMV, TWM and TCC orders are mostly requested by concessionaires and prior to these orders; these will be investigated first by the personnel of the Commercial Dept.

Below are the total number of orders received in 2021 and its corresponding actions to these orders.

Quantity of requests responded per month

REQUESTS	QUANTITY				
	TOTAL RECEIVED	ACCOMPLISHED (a)	RETURNED (r)	CANCELLED (c)	TOTAL ACTED (a + r + c)
CHM	629	528	98	3	629
CDM	103	95	2	6	103
CAV/CMV/DMV/DWV	612	484	128		612
TWM	536	451	79	6	536
TCC	294	250	30	14	294
TOTAL	2174	1808	337	29	2174

The “Total Acted” shown in the table explicitly expressed that all received orders in the year were all responded accordingly. It is the sum of the accomplished, returned and cancelled orders. Accomplished orders are requests where actions were completed in accordance to the requests stipulated. Returned orders are requests returned to the Commercial Dept. due to these some reasons: for CHM orders, service connections observed to be no occupant during visit and its water meters were found to be not blurred and not stuck-up; for TWM orders, concessionaires held their request as they don’t have the hose yet; and for TCC orders, requests were returned to the Commercial Dept. since during the response, concessionaires were not around so it were noted as waiting for the concessionaires to follow-up. While cancelled orders are requests cancelled due to wrong entry of order.

Standard Fire Hydrants and Fabricated Blow-Off

The department has a record of 406 Fabricated Blow-offs and 154 Standard Fire Hydrants subject for maintenance for the year 2021. These are set to be maintained through scheduling. Below shows the quantities approved to be maintained per month and its corresponding accomplishments.

Table 9

MONTH	SCHEDULED			ACCOMPLISHMENT			VARIANCE of ACC. to SCHED.
	Total Qty of FBO	Total Qty of SFH	Grand Total	Total Qty of FBO	Total Qty of SFH	Grand Total	
January	211	29	240	216	30	246	+3%
February	136	80	216	141	81	222	+3%
March	143	73	216	142	76	218	+1%
April	120	38	158	124	37	161	+2%
May	120	38	158	122	50	172	+9%
June	166	54	220	171	53	224	+2%
July	144	66	210	144	66	210	0%
August	125	35	160	115	33	148	-8%

September	66	96	162	74	104	178	+10%
October	137	61	198	140	61	201	+2%
November	125	23	148	127	24	151	+2%
December	152	42	194	132	37	169	-13%

As observed, the department abled to acquire both positive and negative variances. The positive variances are due to the department deferred some complex cases due to unavailability of welding machine and accomplished more simple cases in exchange to these deferred complex cases. On the other hand, negative variances are due to personnel were on quarantine as affected by COVID-19 protocols (August) and personnel were ordered to suspend work due to typhoon Odette (December).

Most of the maintenance works done are the following: cleaning, cutting grasses, repainting body and ID no., install concrete posts, install/replace valve box cover for its gate valve, repair/replace its defective gate valve, elevate unit, and relocate unit away from private property and/or due to affected by the road widening or drainage construction project of DPWH/city//barangay.

Furthermore, the department was able to maintained all 154 Standard Fire Hydrants and 406 Fabricated Blow-offs for about three (3) to four (4) times within the year.

NON REVENUE WATER

District Metered Areas (DMAs)

There were four (4) DMAs operational managed and assessed in 2021.

Banza + Maug one of the operational DMAs, established on October 2017. Average Non-Revenue Water level for this DMA is 14% equivalent to 1,782 cu.m. The minimum night flow for this DMA for this period has an average of 191,000 L/sc/day. The final leakage value for this year is 10.91 cu.m/hr based on the minimum night flow analysis, if compared to its initial leakage value since its establishment with 17.07 cu.m/hr it is considered low and acceptable. It has an equivalent volume recovered of 24,393.60 cu.m. Total number of leaks detected and repaired for this period is 14 leaks.

Buhangin + Mahay has an average NRW of 20% (4,036 cu.m). This DMA has 1,070 active service connection and computed minimum night flow of 247,000 L/sc/day. Initial leakage value since its establishment was 16.36 cu.m/hr and its final leakage value for this period is 12.2 cu.m/hr. The computed volume recovered for this period is 16,473.60 cu.m. Total number of leaks detected and repaired for this DMA is 13 leaks.

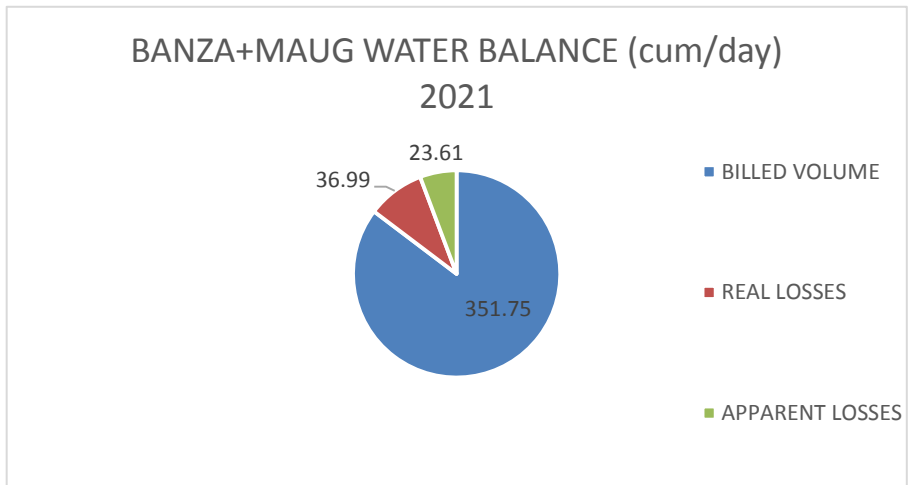
SIMPLIFIED WATER BALANCE

The monthly water balance for each DMA was summarized to investigate the main contributor for the non-revenue water. From January to December 2021, for Banza+Maug, physical loss was the major contributor of non-revenue water. For Buhangin + Mahay, the major contributor was apparent loss.

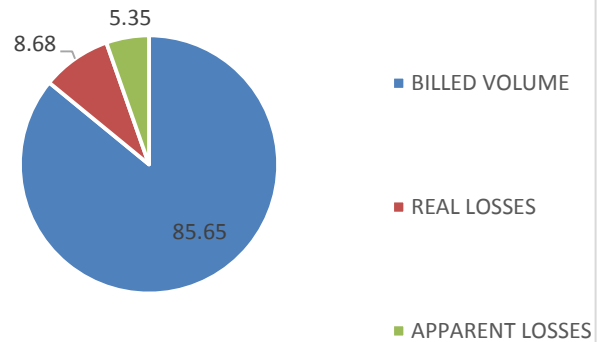
Shown below are the Simplified Water Balance for Banza+Maug and Buhangin+Mahay.

BANZA + MAUG WATER BALANCE

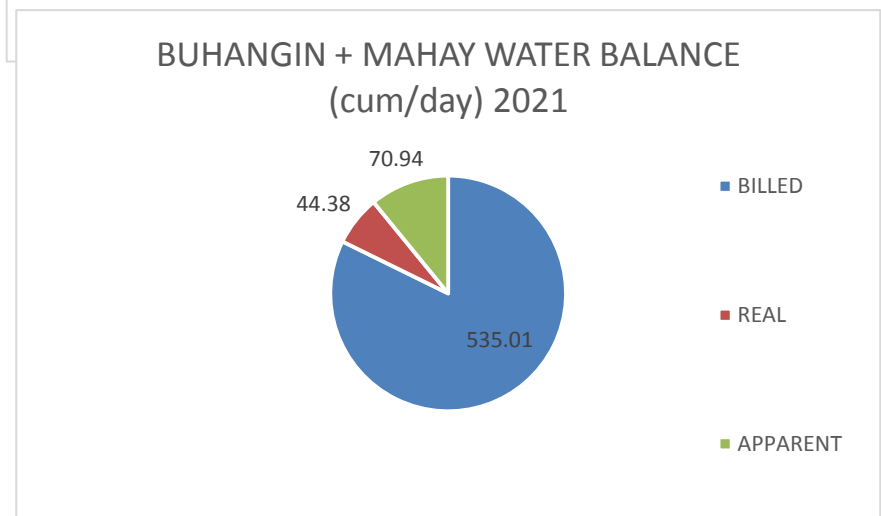
	cu.m/ day	%
BILLED VOLUME	351.75	85.65
REAL	36.99	8.68
APPARENT	23.61	5.35



BANZA+MAUG WATER BALANCE (%) 2021



BILLED	535.01	82.67
REAL	44.38	6.29
APPARENT	70.94	10.91



Additional operational DMAs are Mahogany and Tiniwisan + Cabcabon. These DMAs were managed and monitored by the team for the last six months. Both DMAs have high initial leakage value of 24.13 cu.m/hr and 17.68 cu.m/hr, respectively. Final leakage value will be computed after a year from its establishment since the Team is still conducting intensive visible and hidden leak detection in this DMAs.

Active Leak Detection

Aside from managing these four (4) DMAs, the team had also conducted, visible leak detection in other nineteen (19) areas: Ampayon, Antongalon, Baan Km. 3, Baan Riverside, Basag, Lemon, Pigdaulan, Agusan Pequeño, Pagatpatan, Taguibo, Taligaman, Bading, Doongan, Bonbon, Golden Ribbon, Libertad, Obrero, Datu Silongan and Villa Kananga.

There are a total of 475 leaks found by the NRW Team during active leak detection for the year 2021. Out of 475, 429 (90.32% of the total leaks found) are located at the Eastern Portion of the BCWD Service Area and 46 (9.68% of the total leaks found) are found on the Western Portion of the BCWD Service Area.

The highest leak frequency are located at Brgy. Ampayon with 119 found leaks (25.05% of the total leaks found), followed by Brgy. Antongalon with 100 found leaks (21.05% of the total leaks found) and followed by Brgy. Taguibo with 66 leaks found (13.89% of the total leaks found). The Barangays with the high frequency of leaks are located at the Eastern Portion of the entire BCWD Service Area.

Out of the 475 leaks, 390 are leaks found on the 1-inch diameter service line (82.11% of the total leaks), followed by leaks that are found on the 3/4-inch diameter pipe (10.74% of the total leaks) and leaks found on the meter stand/cluster/meter (2.95% of the total leaks).

Three (3) of the Barangays of the service area has the highest frequency of leaking 1-inch diameter service line; Brgy. Antongalon with 98 found leaks (25.13% of the total 1-inch service line leaks), Brgy. Ampayon with 93 found leaks (23.85% of the total 1-inch service line leaks) and Brgy. Taguibo with 59 found leaks (15.13% of the total 1-inch service line leaks).

Service Connections Tagging

The team is also conducting data gathering which is the tagging of service connections. The team have tagged 14,679 water meters for this period in fifteen (15) additional barangays including the four (4) managed DMAs.

Water Meter Maintenance

This is a regular activity to replace the water meters aged five (5) years, thus, service connections installed in the year 2016. The total number of service connections subject for replacement for the 2021 was **10,844**.

However, there were only **3,225** service connections replaced for the year.

MONTH	NO. OF SC SUBJECT FOR REPLACEMENT	ACCOMPLISHMENT
January	981	597
February	428	576
March	306	72
April	598	0
May	872	215
June	1414	177
July	993	264
August	1039	275
September	1176	246
October	1058	300
November	1140	279
December	839	224
TOTAL	10844	3225

During the previous year, two teams were utilized in this activity. However, due to the prioritization of the **check-up of zero monthly consumption for three (3) months and decreasing monthly consumption for the past six (6) months**, only one (1) team remained to implement this.

Since the number of service connections was too much for one team with two (2) personnel, PAMD has set for its individual target per personnel of **seven (7) service connections per day**.

Zero Monthly Consumption

We checked **4,299** service connections with Zero Monthly Consumption for three (3) months and **173** service connections with Decreasing Monthly Consumption for the past six (6) months. Below shows the findings on these service connections:

A. For WMs checked due to Zero Monthly Consumption for 3 months

PHYSICAL CONDITION	QTY	% to Total
Normal Function	3,271	76%
Defective WMs	137	3%
Cannot be checked	633	15%
Not found	258	6%
TOTAL	4,299	100%

B. For WMs checked due to Decreasing Monthly Consumption for the past 6 months

PHYSICAL CONDITION	QTY	% to Total
Normal Function	157	91%
Defective WMs	3	2%
Cannot be checked	4	2%
Not found	9	5%
TOTAL	173	100%

WMs labeled as cannot be checked due to WMs were already padlocked by BCWD and owner, and no water flow at the time of checking. Moreover, WMs labeled as not found due to WMs already withdrawn by BCWD, and WMs were already replaced with new WMs prior to the list given by the Commercial Dep't. and NRW team.

Nevertheless, this activity was able to discover 140 defective WMs (3.13% of the total WMs checked); and that most of these service connections enlisted have occupants that were transients or not always around, have low water supply and have other primary source of water in their area.

Rehabilitation of Cluster Stand Activity

We were able to rehabilitate 188 clusters within the year, which is 62% behind the anticipated quantity due to the following events:

- a.) From February to 2nd week of December, activity was deferred to prioritize repair of leaking orders and respond to requests from contractors for clearing assistance for the implementation of concrete/asphalt road widening/construction and drainage clearing projects of the government agencies in Brgy. Golden Ribbon, Brgy. Maon, Brgy. Bonbon, Brgy. Ambago, Employees Village, Brgy. Rajah Soliman, Brgy. San Ignacio, Brgy. Agusan Pequeño, Burgos St., Brgy. Sikatuna, Brgy. Imadejas, Brgy. Amamaylan, Brgy. Ampayon, Brgy. Lemon, Brgy. Tandang Sora, Brgy. Villakananga, Brgy. Pinamanculan, Montilla Boulevard near COA, chowking Brgy. Port Poyohon, Durano St., Brgy. Doongan, and Village 2 Brgy. Libertad, JC Aquino, and JA Rosales.
- b.) Due to the implementation of Skeletal Workforce Schedule with Office Order no. 144-2021 that limit personnel to work in a three (3) days' work only that commence on Sept. 7, 2021 and end on Sept. 28, 2021.
- c.) After typhoon Odette, personnel were assigned to water rationing activity.

PERSONNEL AND STAFFING

The total work force of the District as of December 31, 2021 consisted of **217** employees. Out of this, 158 (73%) were employees with Permanent status, 2 (1%) with Temporary status and 57 (26%) with Contract of Service and Job Order status.

Out of the 229 existing positions of BCWD, **160** have been filled up and distributed to the different offices/departments: Office of the Board of Directors, Office of the General Manager and Management Services Department – 17 positions; Administrative Services Department – 38 positions; Finance Department – 19 positions; Commercial Services Department – 26 positions; Engineering Department – 14 positions; Pipeline and Appurtenances Maintenance Department – 27 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 – 45 (21%), followed by the Pipeline & Appurtenances Maintenance Department – 41 (19%), Commercial Services Department – 33 (15%), Production & Distribution Department – 31 (14%), OBD/OGM/MSD - 26 (12%), the Finance Department – 21 (10%) and Engineering Department – 20 (09%).

Personnel Recruitment

Status	Items Processed	2020	2021	Variance	Remarks
Permanent	Appointments	31	12	(19)	Decreased due to resignation, transfer to other agency and death of permanent employee
Temporary	Appointments	0	2	2	Two (2) appointed employees are yet to acquire the eligibility for the position
Contract of Service	Contracts	14	7	(7)	Decreased due resignation, end of contract and termination of contract

Renewal of Employment

Status	Items Processed	2020	2021	Variance	Remarks
Contract of Service	Contracts	58	54	(4)	Decreased due to resignation, end of contract and termination of contract

Personnel Movements

DEPARTMENT	NO. OF PERSONNEL	PERCENTAGE
ADMIN	45	21%
PAMD	41	19%
COMMERCIAL	33	15%
PRODUCTION	31	14%
OBD/OGM/MSD	26	12%
FINANCE	21	10%
ENGINEERING	20	09%
GRAND TOTAL	217	100%

Status	No. of Appointments		Variance	Remarks
	2020	2021		
Promotion – Permanent	16	8	(8)	Promoted to permanent position decreased by eight (8) due to budget constraints
Promotion – Temporary (in nature)	0	1	1	Only one (1) permanent employee has been promoted to temporary in status
Permanent - Transfer	2	2	0	Same number of permanent employees transferred to other agency
Temporary Status to Permanent	0	0	-	No Temporary personnel has been promoted to permanent position
Contract of Service to Permanent	12	6	(6)	Contract of Service promoted to permanent position decreased by six (6)
Contract of Service to Temporary (in status)	0	1	1	Only one (1) Contract of Service has been appointed to a temporary in status
Project-Based to Permanent	1	0	(1)	No Project-Based personnel has been promoted to permanent in status
Project-Based to Temporary	0	0	-	No Project-Based personnel has been promoted to temporary in status

Separation from the Service

Description	No. of Employees		Variance	REMARKS
	2020	2021		
Death	0	1	1	One (1) employee has been separated due to death
Dropped from the Rolls	0	0	0	None has been dropped from the rolls
End of Contract	4	1	(3)	Personnel whose contract has been ended decreased to three (3)
Termination of Temporary Appointment	0	0	0	No terminated temporary appointment
Retirement	7	1	(6)	Retired employee decreased to six (6)
Resignation (Permanent)	2	2	0	Same number of permanent employee who resigned for two consecutive years due to better career opportunity outside BCWD
Resignation (Contract of Service & Project-Based)	4	3	(1)	Resigned Contract of Service and Project-Based personnel decreased by one (1)
Transfer to Another Agency	1	2	0	Permanent employee who transferred to other agency increased by one (1)

Reasons for leaving	2021	Percentage	REMARKS
Higher pay	2	17%	Second top reason for leaving is due to higher salary offer of other agency
Improved work life balance	0	-	
Career Change	1	8%	One (1) personnel leaved due to change of career (pursue teaching profession)
Agency instability	0	-	
Family and/or personal reasons	1	8%	One (1) personnel leaved due to personal reason (pregnancy)
Conflict with other employees	0	-	
Conflict with supervisor / manager	0	-	
Better career opportunity	6	50%	Majority of the reason for leaving the district is due to better career opportunity
Closer to home	1	8%	One (1) personnel leaved since her new job is closer to her home
Better Benefits	1	8%	One (1) personnel leaved since her new job offers better benefits
Other	0	-	Other reason is to review for the Board exam
Total	12	100%	

Training, Seminars, Orientations & Conventions

We conducted two (2) in-house seminars participated in by 55 employees. There were also 43 different online trainings/seminars conducted by other institutions which benefitted 100 employees. On the other hand, 152 employees were able to attend different virtual conventions/conferences.

Staff 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, 2021 with **217** personnel, the number of service connections per employee ratio is **1:457**, thus with a variance of **240** lacking personnel as indicated in the table above.

Procurement Services

BCWD adhered 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**

When the procurement was below the threshold of P1,000,000.00, BCWD used the alternative methods of procurement that was most applicable to the nature of purchases at hand. BCWD used the “Shopping” and “Small Value Procurement,” and completed the process of procurement.

- **Competitive Bidding**

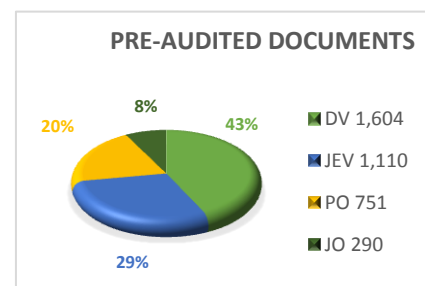
In 2021, there were 11 big procurement projects, with a combined contract price of Php30,170,054.89, successfully completed which had been recommended for award to respective suppliers by the BCWD Bids and Awards Committee (BAC) to the Governing Board. The awards were confirmed and approved during their regular board meetings.

SAFEGUARDS AND CONTROLS

BCWD conducted evaluations to ascertain the degree of compliance with laws, rules, regulations, contract and managerial policies. It ascertained that assets were accounted for and safeguarded from losses. It evaluated the effectiveness and efficiency of the operations; and assessed the internal control system (ICS) whether they were well designed and properly implemented. These objectives were guided by the duties and responsibilities set in conformity with the Philippine Government Internal Audit Manual (PGIAM) and ISO 19011:2011 Guidelines for Auditing Management System.

Pre-audit of transaction documents

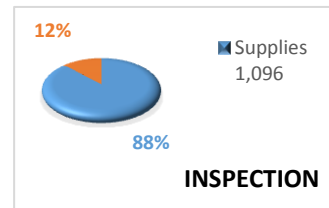
Pre-audit was conducted daily on all transaction documents received with the following number of documents shown in the pie chart, to wit: Disbursement Vouchers (DV) with a total of 1,634, Journal Entry Vouchers with 1,093; Purchase Orders (PO) with 822 and Job Orders (JO) with 375.



Findings and observations found in the documents were noted in the Monthly Summary of Audited Transactions and have been corrected and complied with by the concerned personnel.

Accounting and Safeguarding of Assets

As declared policy that all resources of the government are managed, expended and utilized in accordance with laws and regulations, this Division conducted inspection on supplies/materials/equipment (S/M/E) for items amounting to Php50,000.00 below upon receipt of Inspection Requests from the Property and Materials Management Division (PMMD) and Letter Requests from the departments.



During 2021, a total of 822 transactions (per Purchase Order served) were inspected, with supplies and equipment totaling to 1,461 and 129 respectively, as reflected in the chart.

In addition, a 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.

A total of 68 cash counts has been conducted to the Accountable Officers with breakdown as follows:

General Fund – 49, Working Fund – 9 and Petty Cash Fund - 10

Internal Quality Audit

Internal Quality Audits (IQA) wherein IAD is also part of the team, were conducted on March and August of 2021 to determine whether placed internal controls in the system policies and procedures were effectively implemented and maintained and whether these were in conformance with ISO 9001:2015 QMS, statutory and regulatory requirements.

Audit plan was scoped to cover the elements and processes of all departments, including the familiarity of the employees and officers with adherence to procedures, policies and documentation reports and records.

During the course of audit, several observations were noted in the processes, practice and papers being audited. Observations which were manual-related were consolidated to be requested as one after the proposed review this year. Although numerous issues were identified, some of them were already addressed strengthening the controls and ensuring the effectiveness of the QMS. IQA team has also identified areas of good practice.

FINANCIAL PERFORMANCE HIGHLIGHTS

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

This represents the BCWD's result of operation for the year 2021 after accumulating a total revenue of ₱430,290,030.40 less total expenses amounting to ₱427,655,086.60.

Particulars	2021	2020
Income		
Service and Business Income	419,979,366.63	398,474,050.14
Gains	-	-
Other Non-Operating Income	10,310,663.77	10,752,570.71
Total Income	430,290,030.40	409,226,620.85
Expenses		
Personal Services	93,290,620.60	83,360,045.72
Maintenance and Other Operating Expenses	254,546,888.41	234,794,281.56
Financial Expenses	20,876,823.27	28,978,048.15
Non-Cash Expenses	60,205,526.84	60,788,957.97
Total Expenses	428,919,859.12	407,921,333.40
Comprehensive Income/Loss	1,370,171.28	1,305,287.45

The **Service and Business Income Account** is used to recognize the income from water sales and other income in/ from the regular course of business.

The **Other Gains Account** is used to recognize gains which are not classified under any of the specific gain accounts such as payment from employees for the lost tools and assigned to them.

The **Other Non-Operating Income Account** is used to recognize income from sales of P.E. Tubes, new service connections, laboratory and water quality monitoring services including bacteriological, physical and chemical test, certifications and those that are not classified under specific income accounts.

The **Personnel Services Expenses Account** refers to all salaries and wages as well as other compensations and benefits granted to BCWD officers and employees.

The **Maintenance and Other Operating Expenses Account** refers to all cost incurred throughout the course of rendering services to the concessionaires.

The **Financial Expenses Account** refers to the bank charges, interest expense and gross receipt tax amortization paid to DBP for loan payment.

The **Non-Cash Expenses Account** refers to expenses recognized but does not require outflow of cash such as depreciation and amortization expenses, impairment loss and discounts.

BALANCE SHEET

**BUTUAN CITY WATER DISTRICT
CONDENSED STATEMENT OF FINANCIAL POSITION
(ALL FUNDS)
AS AT DECEMBER 31, 2021**

	NOTE *	2021	2020
ASSETS			
Current Assets			
Cash and Cash Equivalents	3	70,348,685.33	89,621,176.85
Receivables	4	50,459,194.27	60,920,899.57
Inventories	5	37,502,983.44	29,450,919.21
Other Current Assets	9	3,160,315.36	3,715,018.13
Total Current Assets		161,471,178.40	183,708,013.76
Noncurrent Assets			
Investments	6	48,076,275.63	66,580,522.22
Receivables	4	15,536,985.35	11,860,989.35
Property, Plant and Equipment	7	837,115,938.23	891,269,698.65

Intangible Assets	8	513.96	46,948.80
Other Noncurrent Assets	9	<u>18,187,792.80</u>	<u>18,149,952.13</u>
Total Noncurrent Assets		<u>918,917,505.97</u>	<u>987,908,111.15</u>
Total Assets		<u><u>1,080,388,684.37</u></u>	<u><u>1,171,616,124.91</u></u>

LIABILITIES

Current Liabilities

Financial Liabilities	10	112,638,964.11	107,075,451.34
Inter-agency Payables	11	47,542,456.90	58,843,727.25
Trust Liabilities	12	32,373,565.67	31,369,410.01
Deferred Credits/ Unearned Income	13	916,532.19	640,273.12
Provisions	14	7,007,836.03	6,690,728.21
Other Payables	15	<u>2,114,829.10</u>	<u>2,545,795.39</u>
Total Current Liabilities		<u>202,594,184.00</u>	<u>207,165,385.32</u>

Noncurrent Liabilities

Financial Liabilities	10	355,116,876.51	440,088,099.71
Trust Liabilities	12	601,123.93	471,438.28
Deferred Credits/ Unearned Income	13	<u>3,158,051.30</u>	<u>3,427,525.97</u>
Noncurrent Liabilities		<u>358,876,051.74</u>	<u>443,987,063.96</u>
Total Liabilities		<u>561,470,235.74</u>	<u>651,152,449.28</u>

EQUITY

Equity			
Government Equity	16	17,914,209.59	17,914,209.59
Retained Earnings/ (Deficit)	17	<u>501,004,239.04</u>	<u>502,549,466.04</u>
Total Equity		<u>518,918,448.63</u>	<u>520,463,675.63</u>
Total Equity		<u>518,918,448.63</u>	<u>520,463,675.63</u>
Total Liabilities and Equity		<u><u>1,080,388,684.37</u></u>	<u><u>1,171,616,124.91</u></u>

STATEMENT OF CASH FLOWS

	<u>2021</u>	<u>2020</u>
Cash and Cash Equivalents, January 1	89,621,176.85	87,464,676.73
Net cash provided by/ (Used in)		
Operating Activities	69,450,913.02	50,764,313.76
Investing Activities	13,631,418.18	12,477,984.13
Financing Activities	(102,354,822.72)	(61,085,797.77)
Increase/(Decrease) in Cash and Cash Equivalents	(19,272,491.52)	2,156,500.12
Cash and Cash Equivalents, December 31	<u>70,348,685.33</u>	<u>89,621,176.85</u>

This explains the changes in cash and cash equivalents of the BCWD during 2021. These changes are further classified into *operating, investing and financing activities* which resulted to an accumulated decrease in cash and cash equivalents of ₱19,272,491.52 for the said present year.

A significant amount in the Cash Outflow of Operating Activities can be attributed to the payment of bulk water to TASC which increased from a total amount of ₱151,156,641.60 in 2020 to ₱204,586,499.44 in 2021 with a net effect of ₱53,429,857.84, as well as the surge of WSSRB Project's expenditure from ₱2,113,757.38 in 2020 to ₱19,936,973.92 in 2021. Nevertheless, Cash Inflows has increased to ₱40,358,902.29 as the city gradually recovers from the COVID-19 pandemic compared to its preceding year where establishments were forced to suspend operations and the District imposed staggered water bill payment. On the other hand, the net cash decrease in the Financing Activities is driven primarily by the resumption of monthly loan payments in 2021. DBP imposed a 6-month loan moratorium in 2020 which explains the 40% increase in loans payable in 2021.

