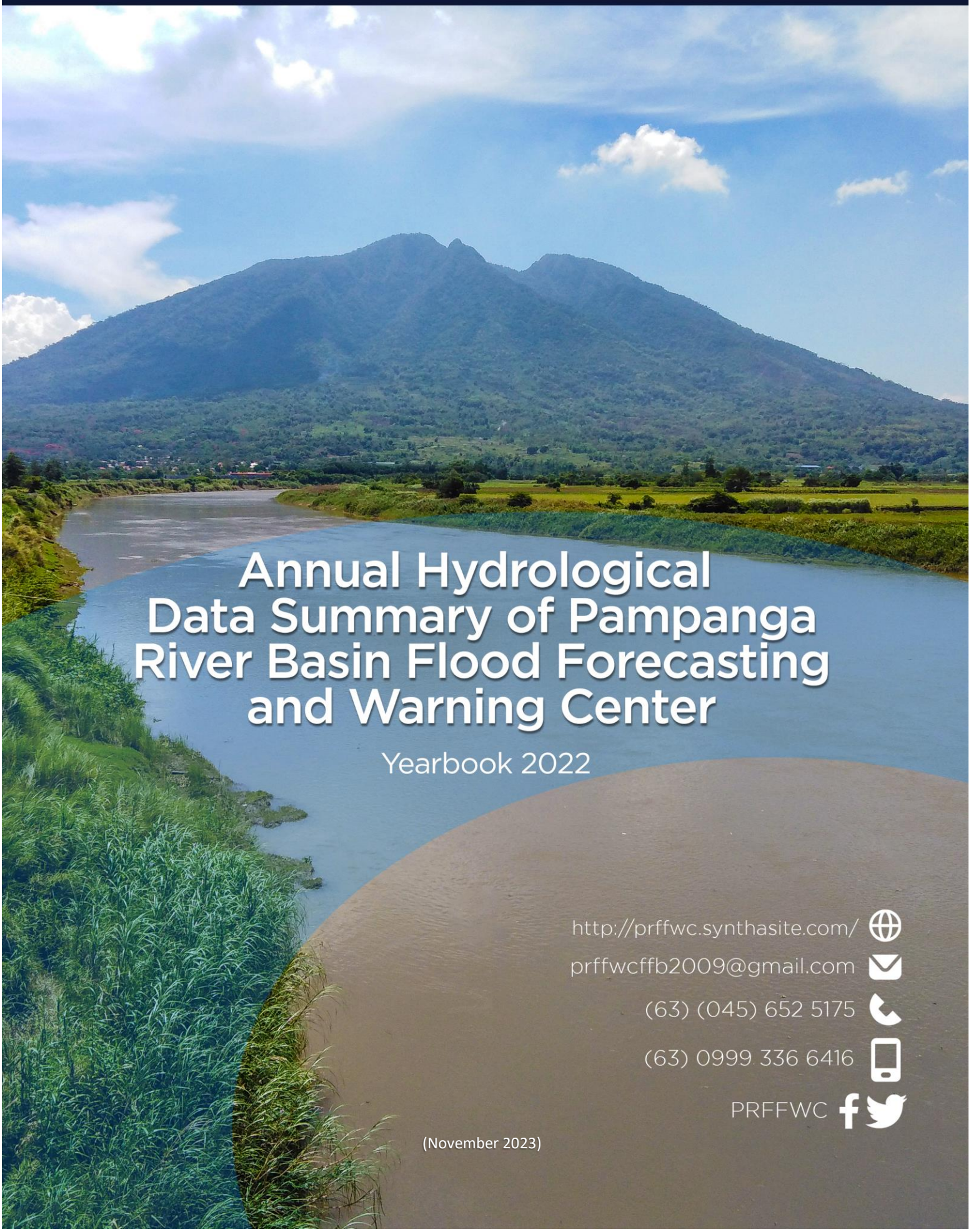
Republic of the Philippines
Department of Science and Technology
Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
PAMPANGA RIVER BASIN FLOOD FORECASTING AND WARNING CENTER (PRFFWC)
DMGC DOST Region 3, Compound, Brgy. Maimpis, City of San Fernando, Pampanga 2000



Annual Hydrological Data Summary of Pampanga River Basin Flood Forecasting and Warning Center

Yearbook 2022

http://prffwc.synthasite.com/
prffwcffb2009@gmail.com
(63) (045) 652 5175
(63) 0999 336 6416
PRFFWC

(November 2023)

Front Cover:

Upstream view of Pampanga River as seen from San Agustin Bridge in Arayat, Pampanga, Philippines. May 26, 2022

Photo by H. Hernando Edited by M. Joson

PRBFFWC Hydrological Data

A summary account of the rainfall and water levels January to December 2022.

Acronyms & Abbreviations:

- CSFP – City of San Fernando, Pampanga
- D/S - downstream
- D/T - downtime
- FFWS – Flood Forecasting & Warning System
- FM – Flood Marker
- HMD – Hydro-Meteorology Division
- HMDAS – Hydro-Met Data Applications Section
- HMTS – Hydro-Met Telemetry Section
- LB – Left Bank
- LST – local standard time
- NIA-UPRIIS – National Irrigation Administration – Upper Pampanga River Integrated Irrigation System
- NCR-PRSD – National Capital Region – PAGASA Regional Services Division
- PAGASA – Philippine Atmospheric, Geophysical and Astronomical Services Administration
- PRB – Pampanga River Basin
- PRFFWC / PRBFFWC – Pampanga River Basin Flood Forecasting & Warning Center
- Q - discharge
- Racc – accumulated rainfall
- RB – Right Bank
- RBFFWC – River Basin Flood Forecasting & Warning Center
- RR – Rainfall
- SG or S.G. – Staff Gauge
- TBM – Temporary benchmark
- U/S - upstream
- WL – Water Level
- X-sect – cross-section

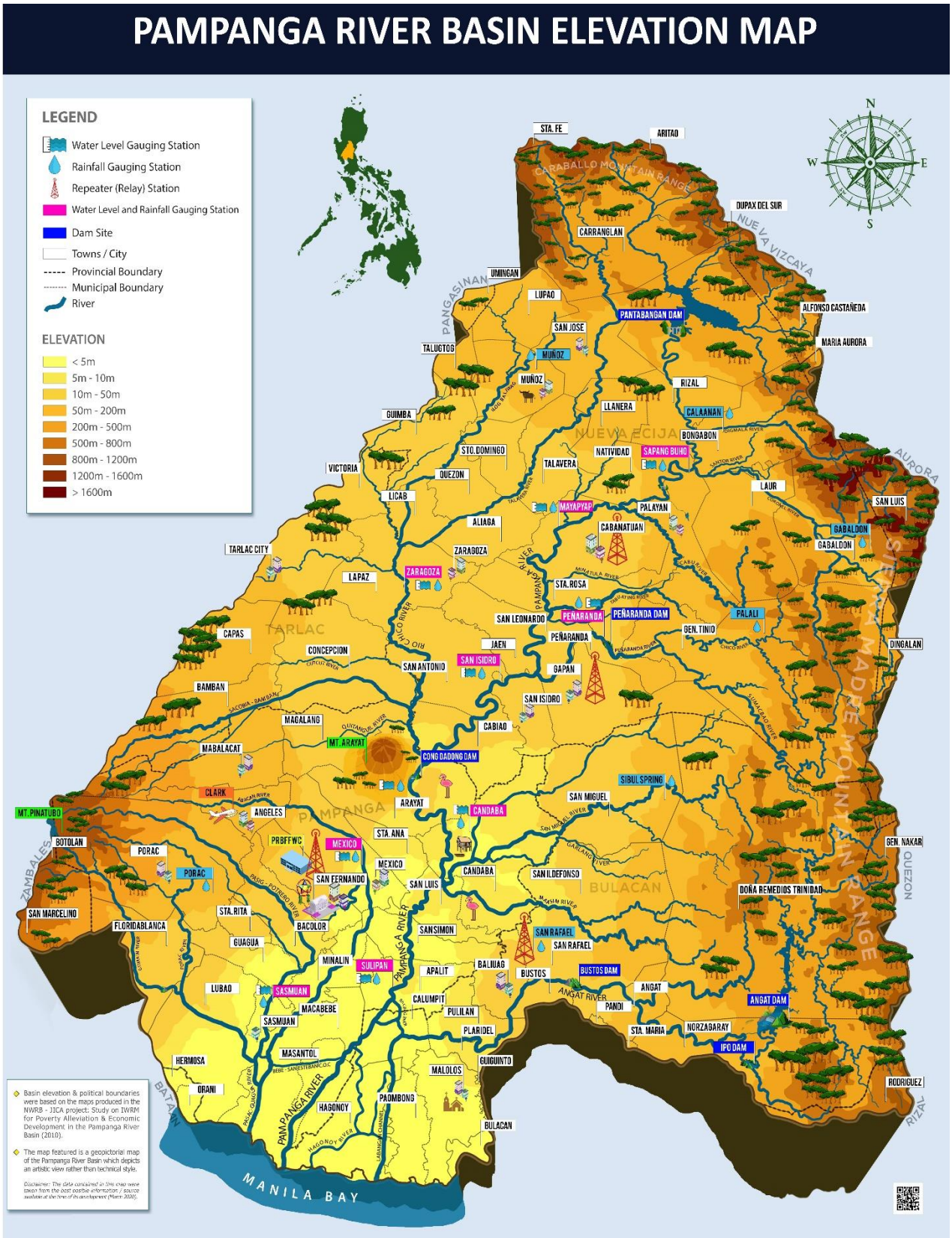
Table of Contents:

Figures:

.

List of Tables:

The PRBFFWC Telemetry Tower located in the City of San Fernando, Pampanga



A generalized area elevation geopictorial map of the Pampanga River Basin with locations of the PRBFFWC telemetry stations (as of Feb 2020).

Yearbook Notes

- A major function of every RBFFWC of PAGASA, aside from issuing flood info / warnings, is to maintain a robust and reliable hydrological database of its river basin of concern.
- This report presents a summary of the available rainfall and water level data observed and recorded by the telemetry system of the PRBFFWC in the year 2022.
- The supervisory terminal of the PRBFFWC system is the main data series considered for its database buildup.
- The main source for complementing breaks / gaps in the supervisory terminal data series are the telemetry stations' data loggers.
- Data validation particularly for telemetry WL readings were at times done by taking pictures of river WL gauges during field trips, that is whenever it is possible, and make this as basis for adjustments.
- No attempts were made to fill-in gaps and breaks in the data series when there are no data presented in the loggers; short breaks for rainfall are usually deduced from accumulated values presented in the supervisory terminal if available; for WL, short gaps are normally filled-in using eye-fit method.
- Obvious errors, suspected or doubtful data were directly deleted from the data series. However, these were done after doing some data consistency check, field surveys, and / or telemetry station instrument validation.
- Red colored values of RR / WL in the summary tables indicate that the dataset in which it was based on is incomplete.
- For further information and clarification on the general buildup of the PRBFFWC data series, please message us thru the following emails: *prffwcffb2009@gmail.com* or *prffwc@gmail.com*

Station Profile

Table 1.0 Table of Rainfall and Water Level Stations of the PRBFFWC

Station	Station Number (DEC) 6301 XX	Station Type RR (rainfall) WL (Water Level)	Location	Coordinates (estimated)
Muñoz	61	Telemetered RR	Within the compound of the Philippine Carabao Center in the Science City of Muñoz, N.E.	15°44'17"N, 120°57'38"E
Sapang Buho	62	Telemetered RR & WL	@ LB of Pampanga River in Bgy. Sapang Buho, Palayan City, Nueva Ecija	15°35'39"N, 121°07'09"E
Gabaldon	63	Telemetered RR	Around 450 meters above the natural ground elevation of Bgy. Malinao, Gabaldon, N.E.	15°29'55"N, 121°21'20"E
Zaragoza	64	Telemetered RR & WL	Along the Zaragoza – La Paz road (RB-D/S of the Rio Chico Bridge)	15°26'36"N, 120°45'03"E
Mayapyap	65	Telemetered RR & WL (defunct since 2015)	@ RB-D/S of Gen. Luna Bridge, (Bgys. Mayapyap & Valdefuente) Cabanatuan City, Nueva Ecija	15°30'52"N, 120°57'20"E
Mayapyap (NIA-UPRIIS)		Telemetered RR (transferred Oct. 2019)	On top of the NIA-UPRIIS Operations Center Bldg., NIA-UPRIIS Compound, Cabanatuan City	15°28'33"N, 120°57'30"E
Peñaranda	66	Telemetered RR & WL	@ LB-D/S side of the bridge, around 550 meters D/S of Peñaranda River Irrigation Dam at Bgy. Uno, Poblacion, Peñaranda, N.E.	15°21'14"N, 121°00'20"E
Calaanan	67	Telemetered RR	Inside the Pesa Elementary School compound, Purok 2, Bgy. Pesa, Bongabon, N.E.	15°38'53"N, 121°11'09"E
Palali	68	Telemetered RR	Within Nueva Ecija Provincial Stock Farm in Bgy. Nazareth, Gen. Tinio, N.E.	15°22'50"N, 121°9'41"E
San Isidro	71	Telemetered RR & WL	@ the RB-D/S side of the San Isidro-Jaen Bridge, San Isidro, N.E.	15°18'49"N, 120°54'09"E
Arayat	72	Telemetered RR & WL	@ RB-D/S side of San Agustin Bridge, Arayat, Pampanga	15°10'06"N, 120°46'56"E
Candaba	73	Telemetered RR & WL	Along Candaba-San Miguel road (Dukma) at Bgy. Paralaya, Candaba, Pampanga	15°06'56"N, 120°51'01"E
Sibul Spring	74	Telemetered RR	Bgy. Sibul, San Miguel, Bulacan	15°10'05"N, 121°03'33"E
Sasmuan	75	Telemetered RR & WL	Bgy. Sta. Lucia (Poblacion), Sasmuan, Pampanga	14°56'11"N, 120°37'23"E
Sulipan	76	Telemetered RR & WL	@ RB of Pampanga River at Bgy. Sulipan, Apalit, Pampanga	14°56'21"N, 120°45'39"E
Mexico	77	Telemetered RR & WL	LB-D/S of Mexico Bridge No. 2, Bgy. Sto. Rosario, Mexico, Pampanga	15°04'05"N, 120°43'51"E
Porac	78	Telemetered RR	Within the municipal compound property, Bgy. Cangatba, Porac, Pampanga	15°04'48"N, 120°32'43"E
San Rafael	90	Telemetered RR (Repeater)	NIA compound, Bgy. Sabang, Baliwag, Bulacan	14°58'05"N, 120°54'52"E
Cabanatuan	89	Repeater station	Within the NIA-UPRIIS Compound, Cabanatuan City	15°28'33"N, 120°57'30"E
PRFFWC (CSFP)		Digital tipping-bucket / manually recorded	PRBFFWC area compound adjacent to DOST-3 bldg., DMGC, Bgy. Maimpis, CSFP	15°04'04"N, 120°39'22"E

Scope and Limitations

1. This Data Yearbook contains the hydrological data summary of the 18 rainfall stations and 8 water level stations (Mayapyap and Mexico WL are non-functional) of the PRBFFWC for the year 2022. There were numerous downtimes and erroneous data readings, mostly WL, during the year as some of the WL sensors were already worn-out, being in operation for more than 13 years already.
2. The rainfall and water level dataset in this report covers the period starting from the past 1-hour observation ending at 0900H of January 01, 2022, and ends at 0800H of 01 January 2023.
3. Accordingly, this follows a 24-hour daily total for rainfall (or average for WL) which starts at (almost) 0801H of the present day and ends at 0800H of the following day (meteorological day); Water level summary values for maximum data are reported as per instantaneous observed value from the dataset but the average value is taken using the same reporting time period as in total rainfall for a meteorological day.
4. The minimum basic time period considered for reporting / observation is hourly.
5. Units used for the hydrological elements:
    a. Rainfall (RR) – millimeters (mm)
    b. Water Level or River Stage (WL) – meters (m)
    c. Cross-sectional area – square meter (m^2)
    d. River Discharge – cubic meters per second or cumecs (m^3/sec)
    e. Rainfall days – rain-days
6. A zero WL reading does not mean that there is no flow in the river but just a limitation of the pressure gauge WL sensors for its measurement range such that flows lower than the sensors capability can no longer be monitored. `
7. The minimum rainfall amount for telemetry stations is 1 mm; and for the rainfall observed in the PRBFFWC in CSFP, the minimum is 0.25 mm;
8. Rain-day is considered as a day with at least 1 mm of rainfall for telemetry stations; and at least 0.25 mm for PRBFFWC station; similar to the daily rainfall total, rain-day follows the met day;
9. The hydrological data summary presented in this yearbook are the daily rainfall observations (met day total), monthly rainfall and average, maximum rainfall total of various periods, and total rain-days per month; the daily water level averages (met day), maximum stage per month and other regular information that were extracted from the built-up data series of each station.
10. In the daily rainfall presentation table, yellow shaded cells indicate rainfall values between 1 to 60 mm for telemetry stations (0.25 to 60.0 for PRBFFWC station); pink shaded cells are from 61 to 180 mm (60.25 to 180.0 for PRBFFWC station); light-red shaded cells are for values greater than 180 mm. Likewise, for water level summary, cell shades are in a graded color scale from a white shade to a regular semi-orange shade that is relative to the increase in water level values. Thus, a "0.00" value (minimum) is white and maximum value within the table will be orange shaded. In the summary below the daily value table, the daily rainfall and in the average daily water level tables, a green shaded cell indicates the maximum value in their respective rows.

Disclaimer: The data summary presented herein have been processed and validated through several steps using the best possible means available to the PRBFFWC at the time of processing. Still, it is possible that outputs may contain inadvertent errors such as typo in nature, errors resulting from possible misuse of excel formulae, and other factors. The summary information in this yearbook report may be revised as new analyses emerges.

Users noting any errors that they may have encountered in this report are requested to inform the PRBFFWC (prffwcffb2009@gmail.com / prffwc@gmail.com). Furthermore, users may use the information contained herein at their own risk.

Data Series Issues of 2022

1. January
    - Sulipan WL looks highly doubtful / erroneous; deleted for the whole month
    - Candaba and Mexico WL are both down
2. February
    - Sulipan WL still doubtful / erroneous; deleted for the whole month
    - Sapang Buho WL were mostly taken from logger data
    - Candaba and Mexico WL are still down
3. March
    - Sasmuan RR at of 11mm (1500H, 02 Mar) and of 4mm (1000H, 24 Mar) are both test data and were corrected
    - Candaba, Mexico, & Sulipan WL are all not functioning except for spot observations during validation trip
    - Sasmuan WL was validated as per picture (1000H-1100H, 25 Mar)
    - Arayat supervisory and logger data are in disagreement with one another starting between March 24 to 25; logger data lags supervisory data by roughly 44 days and 2 to 3 hours (the said issue was verified by JG of HMDAS); Supervisory data was determined to be at correct timing with actual river situation based on TC Karding event effects over the PRB

Pic 1 (top) WL validation at Sasmuan station (25 March) and **Pic 2** (right) WL validation at Sapang Buho station (21 March)

4. April
    - Sulipan WL have an unreliable dataset; deleted doubtful portions from the dataset
    - Mayapyap RR logger is higher by about 7mm than supervisory data for a relatively higher total of set of RR observations; as per HMTS the logger will take precedence
    - Candaba RR – zero for the whole month
    - Mexico WL – no observations due to sensor problems

5. May
    - Mayapyap RR supervisory data is not the same with logger; the latter will take precedence in this case as per HMTS issue
    - San Isidro WL – breaks and gaps were not filled-in; maintained the dataset as is
    - Sasmuan WL – breaks / gaps filled-in by logger data but may have some significant discrepancies as instantaneous values are taken and not average for the time period
    - Mexico and Sulipan WL are still not functioning
6. June
    - Arayat supervisory data after 11 June leads logger data in day/time by approximately 44 days and 2 hours such that 0100H, 29 April data for logger corresponds to 0300H, 12 June, for supervisory; this condition may have persisted until the end of the year (see Fig 1.0 below) – possibly until the first maintenance on the following year, January 2023
    - Sasmuan RR at 1100H, 09 Jun of 6mm is test data only
    - Mayapyap RR of 26mm on 1600H, 11 Jun was maintained as no test data was reported that time
    - San Isidro WL gaps were filled-in using eye-fit method
    - PRBFFWC RR at 1900H, 09 Jun was estimated at 62mm & 29; station was reportedly affected by brownout at that time

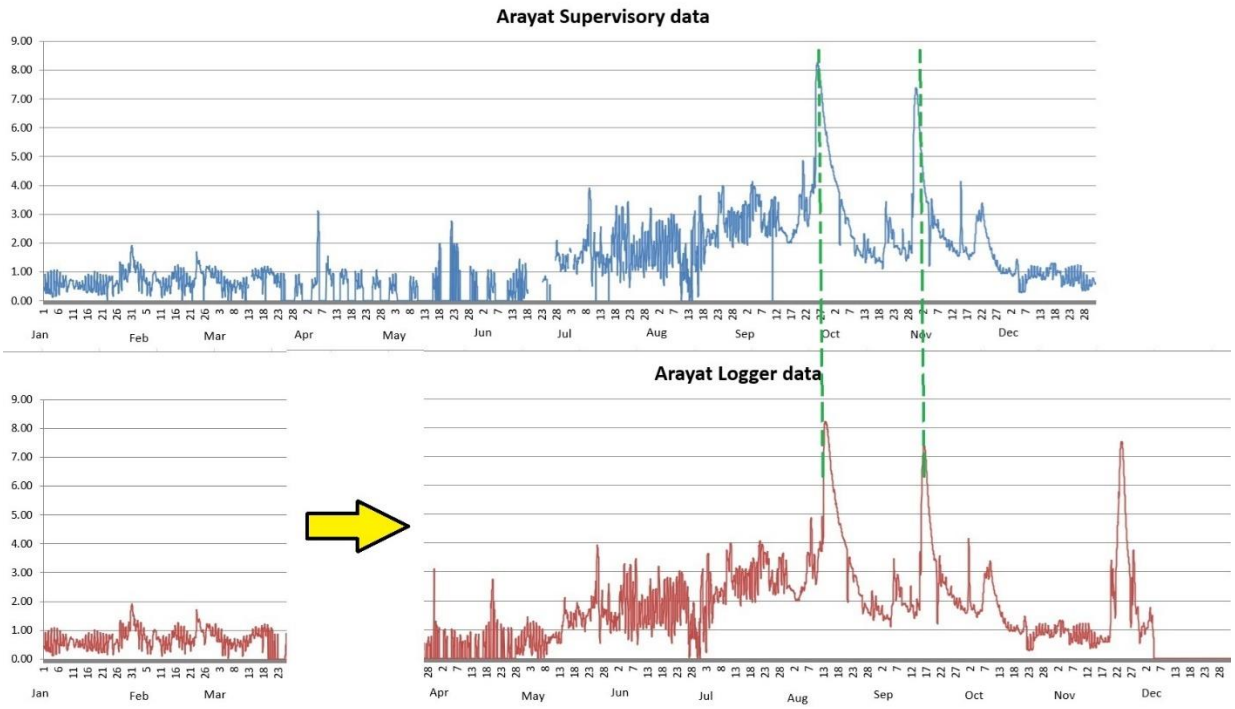


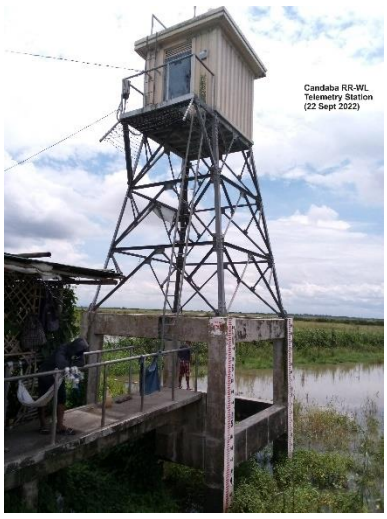
Fig 1.0 Comparison of supervisory (top graph) and logger data (graph below and adjusted to coincide with the supervisory graph) of Arayat telemetry station; the latter shows lagging the former by approximately 44 days and about 2 to 3 hours as per analyzes supplemented by the HMDAS.

7. July
    - Candaba & Sulipan WL were restored on 1700H, 13 Jul and 1400H, 20 Jul, respectively but still for validation
    - CCTV for WL monitoring was installed for Mayapyap in Valdefuente Bridge, Cabanatuan City; Mayapyap RR was directly taken from the logger
    - San Isidro WL gaps filled-in using eye-fit method

8. August
    - Sulipan WL below 1m reading are deemed erroneous and were deleted from the dataset
    - Zaragoza WL gaps filled-in using eye-fit method
    - Logger data was used for Mayapyap RR for the month
    - Erratic WL rise and fall at Arayat may have been affected by Cong Dadong Dam (located about 2.5 kms u/s of the Arayat stream gaging station)

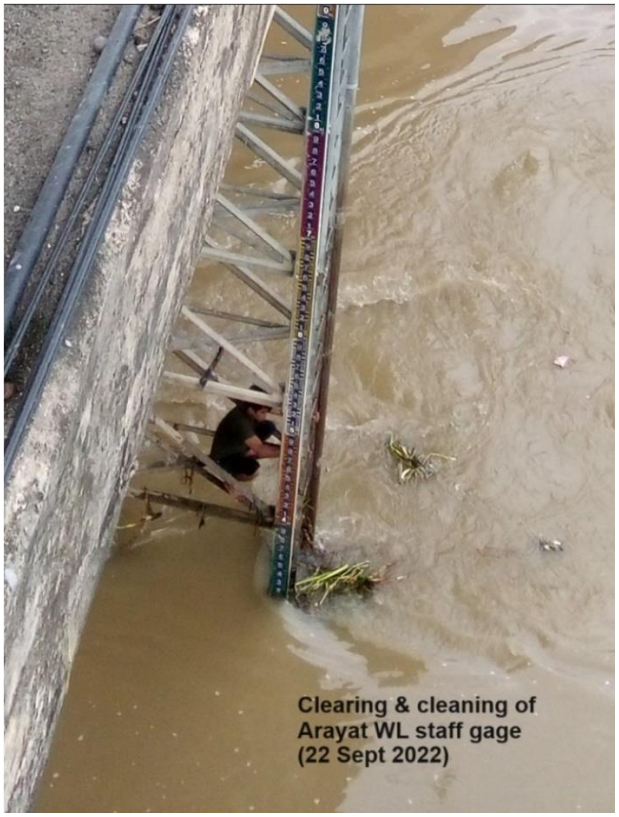
Pic 3 Cong Dadong Dam along the Pampanga River is an irrigation dam and about 2.5 kms upstream of the Arayat Telemetry station which is at the RB of the San Agustin Bridge; the said dam had, at times, affected the flows at Arayat stream gaging station.

9. September
    - Sulipan WL verified by survey using total station and was established at 1.953m (1630H-1700H, 01 Sept)
    - Mayapyap RR was transferred at the top of NIA-UPRIIS OpCen and the 67mm recorded that time is test data (1400H, 07 Sept); CCTV for Mayapyap WL in Valdefuente Bridge was destroyed during the effects of TC Karding in the area
    - San Isidro WL validation on 1256H, 17 Sept with telemetry reading at 0.7m and SG at LB at 1.75m



Field trip activities such as WL validation were carried-out at various stations as follows: **Pic 4** (top L) at Candaba RR-WL telemetry station; **Pic 5** (top middle) at the WL sensor of Sasmuan RR-WL Telemetry station; and **Pic 6** (top R) at Sulipan RR-WL Telemetry station

10. October
    - Zaragoza WL gaps and breaks were filled-in using eye-fit method
    - Logger data was used for Mayapyap RR
    - Sulipan WL stuck at 2.38m reading was deemed erroneous and an inconsistent increase in WL as per flood situation; hence, deleted WL data starting 1400H, 17 Oct
11. November
    - Sulipan WL, except for the validation trip value, were deleted
    - Zaragoza WL gaps and breaks filled-in using eye-fit method
12. December
    - Sulipan WL observations was temporarily shut-off due to erroneous observations
    - Deleted doubtful observations for Candaba WL



Pic 7 Clearing and cleaning of the Arayat SG together with WL validation at the said station

Pic 8 Extending the SG at the lower portion of Mayapyap stream gaging station by painting on the bridge's pier at Bgy. Valdefuente, Cabanatuan City

A. RAINFALL Data Summary Presentation

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Muñoz**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	0	10	22	11	0	5	0
2	0	0	0	0	0	0	0	0	30	2	0	0
3	0	0	0	0	0	0	0	0	10	1	15	8
4	0	0	0	1	0	0	7	22	4	0	2	0
5	0	0	0	0	0	0	4	9	3	0	0	0
6	0	0	0	0	0	0	10	12	0	0	0	0
7	0	0	0	0	0	61	5	6	0	0	0	0
8	0	0	0	0	0	17	3	2	1	0	0	0
9	0	0	0	0	0	0	0	0	19	0	0	0
10	0	0	0	0	0	0	0	8	0	11	0	0
11	0	0	0	0	0	0	0	27	18	1	0	0
12	0	0	0	0	2	12	0	1	0	43	0	0
13	0	0	0	0	2	65	0	11	0	0	0	0
14	0	2	1	0	2	0	4	27	0	0	0	0
15	0	0	0	1	2	0	1	11	0	11	0	0
16	0	0	0	0	16	0	11	21	1	0	0	0
17	0	0	8	0	30	0	38	11	24	0	1	0
18	0	0	0	0	26	7	1	0	0	100	0	0
19	0	0	0	0	30	0	0	0	16	0	12	0
20	0	0	0	0	13	9	10	0	5	21	3	0
21	0	0	0	0	0	1	2	0	11	0	2	0
22	0	3	0	0	12	4	0	4	11	5	2	0
23	0	0	0	0	10	0	7	33	1	0	0	0
24	0	0	0	0	0	0	15	0	1	0	0	0
25	0	0	0	0	1	0	17	0	28	3	0	0
26	1	0	0	0	0	59	3	13	13	0	0	0
27	0	0	1	0	0	5	16	0	8	0	0	0
28	0	0	0	0	2	1	1	9	0	8	0	0
29	1		0	0	0	2	2	0	0	46	0	0
30	16		0	0	0	18	35	0	0	11	0	0
31	0		0		0		5	1		1		0

Monthly Total	18	5	10	2	148	261	207	250	215	264	42	8
Average	0.58	0.18	0.32	0.07	4.77	8.70	6.68	8.06	7.17	8.52	1.40	0.26
Max daily rain	16	3	8	1	30	65	38	33	30	100	15	8
Day of Max Daily	30	22	17	4	17	13	17	23	2	18	3	3
No. of Rain days	3	2	3	2	13	13	22	19	19	14	8	1
Max 1-hr rain	12	2	6	1	14	62	33	22	21	32	12	5
Day of max 1-hr	30	14	17	4	17	13	17	11	2	12	3	4

Total rain for the year	**1430**
Total rain days for the year	**119**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Sapang Buho**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	5	12	18	23	0	0	0
2	0	0	0	0	0	0	0	0	29	5	0	0
3	0	0	0	0	0	0	0	0	9	4	0	12
4	0	0	0	0	0	0	12	12	15	0	0	0
5	0	0	0	9	0	47	20	15	0	0	0	0
6	0	0	0	4	0	1	23	1	2	0	0	0
7	0	0	0	0	0	14	12	3	0	0	0	0
8	0	0	0	0	0	0	5	3	0	0	0	0
9	5	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	1	0	0	3	0	0	0
11	0	0	0	0	0	0	0	0	16	0	0	0
12	0	0	0	0	0	4	8	4	0	0	0	0
13	0	0	3	2	31	2	0	48	0	0	0	0
14	0	0	0	0	0	0	2	0	0	8	0	1
15	0	0	0	4	2	0	27	2	5	9	0	2
16	0	0	0	0	1	0	11	5	57	0	0	0
17	0	0	15	0	45	0	1	3	17	0	10	0
18	0	0	0	0	47	0	6	8	0	7	0	0
19	0	0	0	0	26	0	0	0	36	8	17	0
20	0	0	0	0	19	0	10	0	93	10	6	0
21	0	0	0	0	18	1	2	0	6	0	10	8
22	0	9	0	1	0	16	0	7	27	0	4	0
23	0	0	0	0	1	3	0	11	9	0	2	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	3	0	55	11	0	0
26	3	0	0	0	0	22	28	8	9	0	0	0
27	0	0	0	13	0	26	0	2	3	0	0	0
28	11	0	0	0	15	3	3	0	27	6	0	0
29	1		0	0	0	2	0	0	1	38	0	3
30	49		0	0	0	21	0	18	2	1	0	0
31	0		0		0		1	2		4		0

Monthly Total	69	9	18	33	205	168	186	170	444	111	49	26
Average	2.23	0.32	0.58	1.10	6.61	5.60	6.00	5.48	14.80	3.58	1.63	0.84
Max daily rain	49	9	15	13	47	47	28	48	93	38	17	12
Day of Max Daily	30	22	17	27	18	5	26	13	20	29	19	3
No. of Rain days	5	1	2	6	10	15	18	18	21	12	6	5
Max 1-hr rain	48	3	7	8	19	46	25	24	51	7	7	10
Day of max 1-hr	30	22	17	27	18	5	26	13	16	14	19	4

Total rain for the year	**1488**
Total rain days for the year	**119**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Gabaldon**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	3	0	5	9	48	4	2	2	2
2	0	0	0	0	0	0	0	9	43	3	1	0
3	0	0	0	0	0	0	0	0	12	5	0	12
4	0	0	0	0	0	0	29	28	5	4	13	0
5	0	0	0	13	0	0	0	47	2	1	2	1
6	0	1	0	6	0	7	11	5	0	0	1	1
7	0	1	0	0	2	2	15	7	0	1	3	0
8	0	0	0	1	2	0	17	3	0	0	1	0
9	2	0	0	0	0	1	2	0	4	0	0	2
10	1	0	0	1	0	0	1	0	10	0	2	0
11	0	0	0	0	0	0	2	11	2	0	0	5
12	0	5	1	1	0	10	15	8	0	0	0	0
13	0	22	10	0	96	0	0	10	0	0	9	3
14	0	11	6	0	1	0	16	4	0	134	1	2
15	0	0	0	5	18	0	4	2	0	14	0	14
16	0	0	2	6	7	0	7	0	0	0	1	2
17	0	0	2	0	17	1	2	7	5	1	33	2
18	0	0	7	0	10	4	9	11	2	6	5	0
19	0	0	1	0	8	13	3	0	23	42	49	0
20	0	0	0	0	39	1	55	43	16	7	23	1
21	0	0	0	0	1	1	4	1	4	0	13	1
22	1	50	0	0	0	26	1	42	5	2	15	0
23	1	0	0	1	0	2	0	13	0	0	5	0
24	0	0	0	5	0	1	0	0	0	1	0	0
25	0	2	0	0	0	11	2	1	210	17	0	0
26	27	1	1	0	0	14	10	1	20	0	0	0
27	11	1	0	22	0	4	2	0	14	0	0	0
28	0	0	5	1	12	22	6	1	10	51	2	0
29	0		6	3	3	0	27	1	3	218	0	12
30	9		2	0	0	9	14	1	7	5	1	0
31	0		0		1		33	5		3		1

Monthly Total	52	94	43	68	217	134	296	309	401	517	182	61
Average	1.68	3.36	1.39	2.27	7.00	4.47	9.55	9.97	13.37	16.68	6.07	1.97
Max daily rain	27	50	10	22	96	26	55	48	210	218	49	14
Day of Max Daily	26	22	13	27	13	22	20	1	25	29	19	15
No. of Rain days	7	9	11	13	14	18	25	24	20	19	20	15
Max 1-hr rain	15	14	5	11	32	13	26	28	44	67	23	9
Day of max 1-hr	27	14	14	28	13	23	31	1	25	14	17	16

Total rain for the year	**2374**
Total rain days for the year	**195**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Zaragoza**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	1	28	19	27	0	0	0
2	0	0	0	0	0	0	0	0	18	0	0	0
3	0	0	0	0	0	19	0	0	5	2	0	0
4	0	0	0	0	0	0	8	5	1	0	1	0
5	0	0	0	2	0	0	1	0	22	0	0	0
6	0	0	0	0	0	1	1	0	2	0	0	0
7	0	0	0	0	0	0	1	11	0	13	0	0
8	0	0	0	0	0	0	7	5	0	0	0	0
9	10	0	0	0	0	0	2	0	16	0	0	0
10	0	0	0	0	0	0	6	6	0	22	0	0
11	0	0	0	0	0	0	6	0	0	0	0	0
12	0	0	0	0	0	0	22	4	0	0	0	0
13	0	0	0	0	0	2	0	5	0	0	0	0
14	0	1	2	0	0	2	1	5	21	0	0	1
15	0	0	0	2	26	0	2	21	0	0	0	0
16	0	0	0	0	13	0	25	0	0	0	0	2
17	0	0	20	0	14	0	15	20	2	0	6	0
18	0	0	0	0	22	0	0	0	3	30	0	0
19	0	0	3	0	28	0	6	4	23	2	11	0
20	0	0	0	0	4	0	4	3	4	0	4	0
21	0	0	0	0	8	0	2	0	43	60	0	0
22	0	2	0	0	0	0	0	1	3	0	0	0
23	0	0	1	0	9	0	1	26	0	0	0	0
24	0	0	0	0	3	0	1	0	0	0	0	0
25	0	0	0	0	10	0	2	0	24	8	0	0
26	2	0	0	1	0	29	0	0	1	0	0	0
27	0	0	0	1	0	7	0	2	0	0	0	0
28	0	0	0	0	1	4	14	16	0	2	0	0
29	26		0	0	0	0	0	14	0	25	0	0
30	6		0	0	0	4	0	17	0	2	0	0
31	0		0		0		0	7		2		0

Monthly Total	44	3	26	6	138	69	155	191	215	168	22	3
Average	1.42	0.11	0.84	0.20	4.45	2.30	5.00	6.16	7.17	5.42	0.73	0.10
Max daily rain	26	2	20	2	28	29	28	26	43	60	11	2
Day of Max Daily	29	22	17	5	19	26	1	23	21	21	19	16
No. of Rain days	4	2	4	4	11	9	21	19	16	11	4	2
Max 1-hr rain	26	1	20	2	19	28	20	18	38	37	5	2
Day of max 1-hr	29	14	17	16	19	26	16	1	21	21	19	16

Total rain for the year	**1040**
Total rain days for the year	**107**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Mayapyap**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	11	22	9	0	0	0	0
2	0	0	0	0	2	0	0	0	11	6	0	0
3	0	0	0	0	0	2	0	11	5	5	0	0
4	0	0	0	0	0	0	18	12	13	0	34	0
5	0	0	0	1	0	0	9	6	5	0	0	0
6	0	0	0	2	0	0	1	0	10	0	0	0
7	0	0	0	0	0	16	5	7	0	3	0	0
8	0	0	0	0	0	0	14	4	0	0	0	0
9	27	0	0	0	0	0	0	0	29	0	0	0
10	0	0	0	4	0	6	0	35	1	4	0	0
11	0	0	0	0	0	0	0	0	12	0	0	0
12	0	0	0	6	0	0	3	5	0	7	0	0
13	0	0	1	0	23	5	0	11	0	0	0	0
14	0	0	0	0	34	0	0	3	1	0	0	0
15	0	0	0	49	18	0	60	1	8	0	0	0
16	0	0	0	0	1	0	1	2	1	0	0	0
17	0	0	5	0	42	0	2	18	4	0	10	0
18	0	0	0	0	36	0	2	0	0	10	2	0
19	0	0	2	0	20	0	0	0	0	6	19	0
20	0	0	1	0	6	7	10	0	1	4	3	0
21	0	0	0	0	3	0	2	1	0	0	2	0
22	0	9	0	0	0	13	0	8	0	0	1	0
23	0	0	0	0	4	0	0	19	5	0	1	0
24	0	0	0	0	1	0	18	0	0	0	0	0
25	0	0	0	0	0	0	33	0	109	16	0	0
26	1	0	0	0	0	45	0	15	7	0	0	0
27	0	0	1	1	0	0	0	1	17	0	0	0
28	0	0	0	1	7	19	17	5	0	5	2	0
29	3		0	0	0	0	0	0	0	58	0	1
30	6		0	0	0	11	0	0	0	7	0	0
31	0		0		0		0	19		3		0

Monthly Total	37	9	10	64	197	135	217	192	239	134	74	1
Average	1.19	0.32	0.32	2.13	6.35	4.50	7.00	6.19	7.97	4.32	2.47	0.03
Max daily rain	27	9	5	49	42	45	60	35	109	58	34	1
Day of Max Daily	9	22	17	15	17	26	15	10	25	29	4	29
No. of Rain days	4	1	5	7	13	10	16	20	17	13	9	1
Max 1-hr rain	23	3	2	30	22	29	55	30	33	9	32	1
Day of max 1-hr	9	22	17	16	14	26	15	10	26	29	4	29

Total rain for the year	**1309**
Total rain days for the year	**116**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Peñaranda**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	17	15	12	27	0	0	0
2	0	0	0	0	0	0	0	0	37	5	0	0
3	0	0	0	0	0	0	0	0	13	7	11	6
4	0	0	0	0	0	30	11	34	1	0	6	0
5	0	0	0	4	0	0	13	6	20	0	0	0
6	0	0	0	3	0	0	4	0	2	0	0	0
7	0	0	0	0	0	13	5	16	0	0	0	0
8	0	0	0	0	0	0	20	6	9	0	0	0
9	18	0	0	0	0	0	1	0	91	0	0	0
10	0	0	0	0	0	0	0	1	20	0	5	0
11	0	0	0	0	0	0	5	0	13	0	0	0
12	0	0	0	0	3	1	9	4	2	0	0	0
13	0	0	7	6	0	2	1	28	0	0	0	0
14	0	0	0	0	35	37	0	0	6	0	0	2
15	0	0	0	12	45	0	15	5	0	0	0	1
16	0	0	0	1	0	0	71	0	4	0	0	0
17	0	0	3	0	62	0	2	16	58	8	6	0
18	0	0	1	0	25	3	16	0	0	1	0	0
19	0	0	3	0	30	0	10	32	44	8	20	0
20	0	0	0	0	31	0	10	19	0	2	14	0
21	0	0	0	0	40	0	1	0	0	0	11	0
22	0	13	0	0	2	12	0	9	1	7	0	0
23	0	0	0	0	1	0	0	27	1	0	1	0
24	0	0	0	0	1	0	0	0	0	0	0	0
25	0	0	0	2	0	0	0	1	146	16	0	0
26	8	0	0	0	0	10	2	55	5	0	0	0
27	0	0	0	2	8	0	0	0	18	0	0	0
28	0	0	3	1	22	7	20	6	8	9	0	0
29	0		0	0	0	0	17	7	2	45	0	2
30	22		0	0	0	13	0	21	1	4	0	0
31	0		0		0		4	0		3		0

Monthly Total	48	13	17	31	305	145	252	305	529	115	74	11
Average	1.55	0.46	0.55	1.03	9.84	4.83	8.13	9.84	17.63	3.71	2.47	0.35
Max daily rain	22	13	7	12	62	37	71	55	146	45	20	6
Day of Max Daily	30	22	13	15	17	14	16	26	25	29	19	3
No. of Rain days	3	1	5	8	13	11	21	19	23	12	8	4
Max 1-hr rain	18	6	4	9	38	22	55	29	64	8	7	3
Day of max 1-hr	9	22	14	15	21	4	16	19	25	17	3	3

Total rain for the year	**1845**
Total rain days for the year	**128**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Calaanan**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	1	0	5	0	13	17	0	1	0
2	0	0	0	0	0	0	0	0	45	4	3	2
3	0	0	0	0	0	0	0	0	12	5	0	16
4	0	0	0	0	0	0	17	14	30	0	0	0
5	0	0	0	2	0	0	11	19	7	0	0	0
6	0	0	0	0	0	46	15	22	2	0	0	0
7	0	0	0	0	0	13	16	2	0	0	0	0
8	0	0	0	1	0	0	4	2	5	0	0	0
9	1	0	0	0	0	0	0	0	2	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	1
11	0	0	0	0	0	0	1	2	2	0	0	0
12	0	0	10	0	0	0	3	6	0	0	0	0
13	0	0	0	4	0	6	0	16	0	0	1	7
14	0	0	7	0	8	0	4	1	0	13	0	1
15	0	0	0	0	13	0	33	3	0	10	0	8
16	0	0	13	0	0	0	11	4	14	0	0	0
17	0	0	0	0	16	0	5	2	29	0	8	0
18	0	0	0	0	0	0	3	6	0	24	0	0
19	0	0	0	0	12	0	0	0	55	11	13	0
20	0	0	0	0	21	0	12	0	22	46	8	0
21	0	0	0	0	18	0	0	0	0	0	7	4
22	0	15	0	3	0	16	0	14	8	0	4	0
23	0	0	0	0	0	0	0	16	5	0	3	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	83	13	0	0
26	1	0	0	0	1	26	32	0	17	0	0	0
27	0	0	1	0	0	2	13	7	0	0	0	0
28	0	0	0	0	21	5	7	0	8	16	0	0
29	0		0	0	0	17	10	0	0	78	0	3
30	33		0	0	0	14	11	5	3	3	0	0
31	0		0		0		1	1		2		0

Monthly Total	35	15	31	11	110	150	209	155	366	225	48	42
Average	1.13	0.54	1.00	0.37	3.55	5.00	6.74	5.00	12.20	7.26	1.60	1.35
Max daily rain	33	15	13	4	21	46	33	22	83	78	13	16
Day of Max Daily	30	22	16	13	20	6	15	6	25	29	19	3
No. of Rain days	3	1	4	5	8	10	19	19	19	12	9	8
Max 1-hr rain	28	5	8	4	14	45	20	11	38	20	4	10
Day of max 1-hr	30	22	17	13	21	6	15	6	2	20	19	4

Total rain for the year	**1397**
Total rain days for the year	**117**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Palali**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	10	7	23	4	0	3	0
2	0	0	0	0	0	0	0	0	11	10	0	0
3	0	0	0	0	0	0	0	0	0	5	0	4
4	0	0	0	0	0	5	29	56	0	0	0	0
5	0	0	0	8	0	0	23	7	0	0	0	0
6	0	0	0	1	0	0	12	0	0	0	0	0
7	0	0	0	0	0	4	15	1	0	0	0	0
8	0	0	0	1	0	0	9	0	17	0	0	0
9	1	1	0	0	0	2	0	0	53	0	0	0
10	0	0	0	1	0	0	0	14	7	0	2	0
11	0	0	0	0	0	0	1	0	27	0	0	14
12	1	0	0	31	0	3	29	0	0	0	3	0
13	0	1	9	18	1	4	1	0	0	0	0	2
14	0	19	0	0	3	0	3	0	0	4	0	3
15	0	0	3	2	31	1	0	3	7	0	0	0
16	0	0	0	1	33	0	5	0	0	0	0	2
17	0	0	46	0	52	0	5	0	21	1	6	0
18	0	0	0	0	27	0	3	0	0	29	1	0
19	0	0	0	0	26	9	9	0	37	22	19	0
20	0	0	0	0	75	0	11	1	0	14	19	0
21	1	0	0	0	4	0	2	0	0	0	18	0
22	1	14	0	0	5	8	0	0	1	0	5	0
23	0	0	0	0	8	0	0	0	7	0	2	0
24	0	0	0	6	0	0	0	0	3	0	0	0
25	0	0	0	3	17	0	0	0	108	16	0	0
26	8	0	0	0	15	26	0	0	22	0	0	0
27	1	0	0	6	0	22	2	1	11	0	0	0
28	0	0	0	1	1	4	1	0	1	15	4	0
29	0		0	0	0	10	34	1	1	65	0	6
30	14		0	0	0	5	0	1	1	2	0	0
31	0		0		1		4	5		7		0

Monthly Total	27	35	58	79	299	113	205	113	339	190	82	31
Average	0.87	1.25	1.87	2.63	9.65	3.77	6.61	3.65	11.30	6.13	2.73	1.00
Max daily rain	14	19	46	31	75	26	34	56	108	65	19	14
Day of Max Daily	30	14	17	12	20	26	29	4	25	29	19	11
No. of Rain days	7	4	3	12	15	14	20	11	18	12	11	6
Max 1-hr rain	12	9	21	19	46	13	30	24	34	23	11	9
Day of max 1-hr	30	14	17	12	20	26	29	4	10	18	20	11

Total rain for the year	**1571**
Total rain days for the year	**133**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **San Isidro**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	7	15	9	12	0	1	0
2	0	0	0	0	0	0	0	0	13	2	0	0
3	0	0	0	0	0	0	0	0	10	6	31	2
4	0	0	0	0	0	1	5	10	3	0	0	0
5	0	0	0	3	0	0	28	8	10	0	0	0
6	0	0	0	2	0	0	0	0	17	0	0	0
7	0	0	0	0	0	8	3	8	0	0	0	0
8	0	0	0	0	0	0	9	5	0	0	0	0
9	2	0	0	0	0	0	24	0	5	0	0	0
10	0	0	0	0	0	0	0	1	3	0	2	0
11	0	0	0	0	0	0	2	0	19	0	0	1
12	0	0	0	0	0	0	4	2	6	0	0	0
13	0	0	3	15	0	0	1	27	12	0	0	0
14	0	0	0	0	0	6	0	0	5	0	0	3
15	0	0	0	0	0	0	0	2	0	0	0	0
16	0	0	0	0	0	0	69	0	2	0	0	0
17	0	0	0	0	0	0	4	12	10	7	2	0
18	0	0	0	0	34	0	6	0	0	5	0	0
19	0	0	0	0	15	0	13	7	33	6	15	0
20	0	0	0	0	14	0	9	24	0	0	11	0
21	0	0	0	0	14	0	1	0	2	0	7	0
22	0	6	0	0	0	0	0	7	4	0	0	0
23	0	0	0	0	14	0	0	26	1	0	0	0
24	0	0	0	0	0	0	7	0	0	0	0	0
25	0	0	0	0	0	0	2	0	112	15	0	0
26	4	0	0	0	0	0	0	61	8	0	0	0
27	0	0	0	0	0	4	2	0	1	0	0	0
28	1	0	0	0	9	4	11	31	0	9	0	0
29	0		0	0	0	0	2	1	3	51	0	0
30	21		0	0	0	5	0	3	0	4	0	0
31	0		0		0		0	3		5		0

Monthly Total	28	6	3	20	100	35	217	247	291	110	69	6
Average	0.90	0.21	0.10	0.67	3.23	1.17	7.00	7.97	9.70	3.55	2.30	0.19
Max daily rain	21	6	3	15	34	8	69	61	112	51	31	3
Day of Max Daily	30	22	13	13	18	7	16	26	25	29	3	14
No. of Rain days	4	1	1	3	6	7	20	19	22	10	7	3
Max 1-hr rain	20	4	3	14	23	8	60	34	36	8	16	1
Day of max 1-hr	30	22	14	13	18	7	16	16	25	29	3	3

Total rain for the year	**1132**
Total rain days for the year	**103**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Arayat**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0		0		19	6	23	0	0	0
2	0	0	0		0		0	0	8	0	0	0
3	0	0	0		0		0	15	4	2	0	7
4	0	0	0	0		0	3	6	0	1	24	0
5	0	0	0	11		0	15	25	2	0	0	0
6	0	0	0	0		1	11	0	18	0	0	0
7	0	0	0				13	11	0	0	0	0
8	0	0	0		0		3	13	7	0	0	0
9	0	0	0	0	0		6	0	67	0	0	0
10	0	0	0	0	0		0	0	0	0	6	4
11	0	0	0	0		0	0	2	0	3	0	0
12	0	0	0			0	5	15	0	0	0	0
13	0	0	5			0	0	3	0	0	0	0
14	0	0	0	8		7	0	2	0	21	0	1
15	0	0	0	62		0	0	3	0	2	0	0
16	0	0	0	0	5	0	39	0	0	0	3	0
17	0	0	0		6	0	15	8	0	0	1	0
18	0	0	0		53	3	3	0	0	0	1	0
19	0	0	0	0		0	4	17	27	6	17	0
20	0	0	0	0		0	15	49	4	0	5	0
21	0	0	0	0		0	1	5	17	0	14	0
22	0	3	0		5	9	0	2	5	0	0	0
23	0	0	0		7	0	0	42	0	0	0	0
24	0	0	0		0	0	0	0	0	0	0	0
25	0	0	1	0	0	0	25	0	134	12	0	0
26	0	0	0	0		36	0	14	1	0	0	0
27	0	0	0	0		0	0	0	2	0	0	0
28	0	0	0			27	14	48	0	8	0	0
29	0		0		0	2	1	27	1	66	0	0
30	0		0		0	7	0	0	0	7	0	0
31	0		0		0		5	5		3		0

Monthly Total	0	3	6	81	76	92	197	318	320	131	71	12
Average	0.00	0.11	0.19	5.40	4.75	4.00	6.35	10.26	10.67	4.23	2.37	0.39
Max daily rain	0	3	5	62	53	36	39	49	134	66	24	7
Day of Max Daily	1	22	13	15	18	26	16	20	25	29	4	3
No. of Rain days	0	1	2	3	5	8	18	21	15	11	8	3
Max 1-hr rain		3	3	30	29	24	32	42	47	11	21	4
Day of max 1-hr		22	14	16	18	26	16	20	25	14	4	10

Total rain for the year	**1307**
Total rain days for the year	**95**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Candaba**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	0	12	5	1	0	1	0
2	0	0	0	0	0	0	0	0	4	1	0	0
3	0	0	0	0	0	0	0	7	3	2	12	6
4	0	0	0	0	0	0	5	8	5	1	0	0
5	0	0	0	0	0	0	32	15	0	1	0	0
6	0	0	0	0	0	0	1	0	15	0	0	0
7	0	0	0	0	0	0	6	9	0	0	0	0
8	0	0	0	0	0	0	6	6	10	0	0	0
9	0	0	0	0	0	0	5	0	50	0	0	0
10	0	0	0	0	0	0	0	0	10	0	8	0
11	0	0	0	0	0	4	0	0	8	12	0	0
12	0	0	0	0	0	0	8	16	0	0	0	0
13	0	0	2	0	0	0	2	14	0	28	0	0
14	0	0	2	0	38	12	0	1	5	2	0	2
15	0	0	0	0	14	0	0	4	0	5	0	1
16	0	0	0	0	10	0	33	1	26	0	5	3
17	0	0	0	0	1	0	6	32	14	0	0	0
18	0	0	0	0	3	0	7	0	0	0	2	0
19	0	0	0	0	5	0	0	29	1	9	15	0
20	0	0	0	0	5	0	14	16	11	0	16	0
21	0	0	0	0	4	0	1	2	1	29	15	0
22	0	0	0	0	1	14	0	7	1	0	3	0
23	0	0	0	0	1	0	0	31	1	0	0	0
24	0	0	0	0	2	0	1	0	13	0	0	0
25	0	0	0	0	2	0	1	1	70	12	0	0
26	0	0	0	0	0	13	0	0	1	0	0	0
27	0	0	0	0	2	0	0	0	15	0	0	0
28	0	0	0	0	0	12	36	26	0	12	0	0
29	0		0	0	0	0	0	9	1	66	0	0
30	7		0	0	0	7	0	6	0	3	0	0
31	0		0		0		6	0		10		0

Monthly Total	7	0	4	0	88	62	182	245	266	193	77	12
Average	0.23	0.00	0.13	0.00	2.84	2.07	5.87	7.90	8.87	6.23	2.57	0.39
Max daily rain	7	0	2	0	38	14	36	32	70	66	16	6
Day of Max Daily	30	1	13	1	14	22	28	17	25	29	20	3
No. of Rain days	1	0	2	0	13	6	18	21	22	15	9	4
Max 1-hr rain	6		1		12	11	30	29	28	19	12	3
Day of max 1-hr	30		14		14	14	28	17	5	21	3	3

Total rain for the year	**1136**
Total rain days for the year	**111**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Sibul Springs**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	1	0	5	7	100	21	1	1	1
2	0	0	0	0	0	0	0	0	7	5	0	0
3	0	0	0	0	0	0	0	0	4	7	1	8
4	0	0	0	0	0	0	17	14	1	0	0	0
5	0	0	0	36	0	0	5	67	1	0	0	0
6	0	0	0	6	0	6	6	0	0	0	0	0
7	0	0	0	0	0	0	7	24	0	0	0	0
8	0	0	0	0	0	1	14	5	3	0	0	0
9	2	0	0	0	0	0	0	0	9	0	0	0
10	0	0	0	0	0	0	11	0	15	0	23	0
11	0	0	0	0	0	0	0	0	4	34	5	0
12	0	0	0	44	0	0	14	2	1	1	1	0
13	0	3	19	23	0	8	4	64	0	1	0	0
14	0	7	3	4	0	10	2	2	0	10	0	7
15	0	0	0	34	8	2	0	14	0	7	0	2
16	0	0	0	0	6	0	28	0	20	0	4	2
17	0	0	7	0	87	0	2	2	6	0	3	0
18	0	0	0	0	56	5	6	1	4	29	1	0
19	0	0	8	0	46	14	2	3	23	17	24	0
20	0	0	0	0	6	1	8	11	2	2	27	0
21	0	0	0	0	0	0	1	0	5	0	26	5
22	0	20	0	0	0	35	1	5	36	10	0	0
23	0	0	0	0	20	0	0	25	0	0	0	0
24	0	0	0	3	11	0	0	0	2	0	0	0
25	0	0	0	2	2	0	0	2	166	19	1	0
26	7	0	0	0	0	3	0	1	22	0	0	0
27	0	0	0	4	0	0	0	1	19	0	0	0
28	0	0	1	1	18	22	18	7	0	19	1	0
29	0		1	1	0	0	11	0	8	67	0	3
30	6		0	0	8	12	0	43	0	1	0	0
31	0		0		0		2	3		9		0

Monthly Total	15	30	39	159	268	124	166	396	379	239	118	28
Average	0.48	1.07	1.26	5.30	8.65	4.13	5.35	12.77	12.63	7.71	3.93	0.90
Max daily rain	7	20	19	44	87	35	28	100	166	67	27	8
Day of Max Daily	26	22	13	12	17	22	16	1	25	29	20	3
No. of Rain days	3	3	6	12	11	13	20	21	22	17	13	7
Max 1-hr rain	4	8	7	23	38	16	23	64	65	19	13	5
Day of max 1-hr	27	22	19	12	18	23	16	1	25	18	19	21

Total rain for the year	**1961**
Total rain days for the year	**148**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Sasmuan**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	0	10	2	12	2	0	0
2	0	0	0	0	0	0	0	0	11	0	0	0
3	0	0	0	0	0	0	0	12	20	1	0	2
4	0	0	0	2	0	0	20	8	25	0	0	0
5	0	0	0	27	0	0	1	44	23	0	0	0
6	0	0	0	0	0	0	40	21	1	0	0	0
7	0	0	0	0	0	0	2	71	4	0	0	0
8	0	0	0	0	0	0	3	23	8	0	0	0
9	0	0	0	0	0	5	6	0	1	0	0	0
10	0	0	0	0	0	0	3	0	0	0	6	4
11	0	0	0	0	0	0	5	0	0	0	0	0
12	0	0	0	0	1	3	18	31	0	0	0	0
13	0	0	0	0	0	0	1	4	0	0	0	0
14	0	0	11	0	0	18	0	2	0	0	0	0
15	0	0	4	10	0	3	0	2	0	0	0	0
16	0	0	0	0	11	11	1	0	0	0	0	3
17	0	0	0	0	17	0	13	21	0	9	5	0
18	0	0	0	0	6	0	1	3	22	1	0	0
19	0	0	0	0	24	9	0	3	10	88	4	0
20	0	0	0	0	0	90	12	0	0	2	3	0
21	0	0	0	0	6	12	2	3	39	3	0	0
22	0	3	0	23	8	30	0	11	0	0	0	0
23	0	0	0	0	16	0	0	38	2	2	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	1	0	75	4	0	0
26	0	0	0	21	0	40	2	0	0	0	0	0
27	0	0	0	0	10	0	0	0	20	0	0	0
28	0	0	0	0	1	4	0	2	0	5	0	0
29	0		0	2	0	3	0	53	0	104	0	0
30	0		0	0	4	16	0	0	0	17	1	0
31	0		0		0		0	23		19		0

Monthly Total	0	3	15	85	104	244	141	377	273	257	19	9
Average	0.00	0.11	0.48	2.83	3.35	8.13	4.55	12.16	9.10	8.29	0.63	0.29
Max daily rain	0	3	11	27	24	90	40	71	75	104	6	4
Day of Max Daily	1	22	14	5	19	20	6	7	25	29	10	10
No. of Rain days	0	1	2	6	11	13	18	20	15	13	5	3
Max 1-hr rain		3	7	21	17	62	40	47	23	47	4	3
Day of max 1-hr		22	15	22	17	20	6	8	21	19	17	10

Total rain for the year	**1527**
Total rain days for the year	**107**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Sulipan**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	7	12	10	2	10	0	0
2	0	0	0	0	0	0	0	0	5	1	0	0
3	0	0	0	0	0	1	1	2	14	2	2	2
4	0	0	0	5	0	0	5	23	6	0	1	1
5	0	0	0	42	0	0	3	41	0	0	0	0
6	0	0	0	0	0	0	0	14	1	0	0	0
7	0	0	0	0	0	0	1	16	0	0	0	0
8	0	0	0	0	0	4	26	9	26	0	0	0
9	0	0	0	0	0	5	0	0	6	0	0	0
10	0	0	0	0	0	0	12	0	0	0	6	5
11	0	0	1	0	0	0	17	0	0	5	1	0
12	0	0	0	0	0	0	21	20	0	1	0	0
13	0	0	2	0	57	0	0	9	0	4	0	0
14	0	0	4	0	0	0	0	13	0	0	0	1
15	0	0	1	1	0	0	0	14	0	0	0	0
16	0	0	0	0	12	10	10	1	0	0	2	1
17	0	0	0	3	20	0	5	26	0	9	0	0
18	0	0	0	0	12	0	3	0	7	2	1	0
19	0	0	0	0	16	0	0	1	8	12	6	0
20	0	0	0	0	1	5	12	5	4	0	6	0
21	0	0	0	0	0	2	1	6	2	5	0	4
22	2	6	0	3	5	35	1	8	9	0	0	0
23	0	0	0	0	10	0	2	36	3	1	0	0
24	0	0	0	0	0	0	3	0	6	0	0	0
25	0	0	0	1	0	0	0	0	65	8	1	0
26	0	0	0	0	4	5	31	10	3	0	0	0
27	0	0	0	0	19	0	0	0	8	0	0	0
28	0	0	0	0	1	24	2	15	0	9	0	0
29	0		0	1	0	0	0	1	1	86	0	0
30	5		1	0	4	4	0	2	0	10	3	0
31	0		0		0		34	0		17		0

Monthly Total	7	6	9	56	161	102	202	282	176	182	29	14
Average	0.23	0.21	0.29	1.87	5.19	3.40	6.52	9.10	5.87	5.87	0.97	0.45
Max daily rain	5	6	4	42	57	35	34	41	65	86	6	5
Day of Max Daily	30	22	14	5	13	22	31	5	25	29	10	10
No. of Rain days	2	1	5	7	12	11	20	22	18	16	10	6
Max 1-hr rain	3	2	2	6	43	18	31	18	22	12	4	5
Day of max 1-hr	30	22	14	5	14	22	31	12	8	29	11	10

Total rain for the year	**1226**
Total rain days for the year	**130**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Mexico**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	0	24	6	3	0	0	0
2	0	0	0	0	0	0	0	2	9	0	0	0
3	0	0	0	0	0	0	0	0	6	2	0	5
4	0	0	0	0	0	0	7	10	2	0	8	0
5	0	0	0	14	0	0	13	17	5	0	0	0
6	0	0	0	0	0	1	0	5	1	0	0	0
7	0	0	0	0	0	0	15	15	0	0	0	0
8	0	0	0	0	0	0	3	13	9	0	0	0
9	0	0	0	0	0	6	19	0	10	0	0	0
10	0	0	0	0	0	0	0	0	0	0	5	0
11	0	0	0	0	0	0	1	0	0	18	0	0
12	0	0	0	0	19	14	17	4	5	0	0	0
13	0	0	2	0	0	0	0	34	0	14	0	0
14	0	0	5	1	7	0	1	4	3	1	0	0
15	0	0	9	38	3	0	9	3	0	0	0	1
16	0	0	0	0	7	16	10	0	0	0	4	0
17	0	0	0	0	4	0	4	9	0	7	3	0
18	0	0	0	0	32	0	2	5	0	1	1	0
19	1	0	0	0	13	0	6	8	2	14	14	0
20	0	0	0	0	1	0	42	6	5	0	7	0
21	0	0	0	7	2	0	1	11	20	3	6	0
22	0	0	0	0	8	39	2	3	0	2	0	0
23	0	0	0	0	29	0	0	41	0	0	0	0
24	0	0	0	0	0	0	23	0	8	0	0	0
25	0	0	0	0	0	0	17	0	96	9	0	0
26	0	0	0	0	0	4	0	4	1	0	0	0
27	4	0	0	1	1	9	0	0	7	0	0	0
28	0	0	0	0	0	38	12	51	0	8	0	0
29	0		0	0	0	5	20	18	0	52	0	0
30	3		2	0	0	12	4	2	1	13	0	0
31	0		0		0		3	13		5		0

Monthly Total	8	0	18	61	126	144	255	284	193	149	48	6
Average	0.26	0.00	0.58	2.03	4.06	4.80	8.23	9.16	6.43	4.81	1.60	0.19
Max daily rain	4	0	9	38	32	39	42	51	96	52	14	5
Day of Max Daily	27	1	15	15	18	22	20	28	25	29	19	3
No. of Rain days	3	0	4	5	12	10	23	23	18	14	8	2
Max 1-hr rain	4		7	15	21	21	23	28	28	14	6	4
Day of max 1-hr	27		16	16	23	22	20	13	25	11	4	3

Total rain for the year	**1292**
Total rain days for the year	**122**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **Porac**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	0	15	5	4	0	0	0
2	0	0	0	0	0	0	0	0	18	0	0	0
3	0	0	0	0	0	0	0	6	18	0	0	6
4	0	0	0	0	0	0	3	7	0	0	21	0
5	0	0	0	7	0	0	6	47	0	0	0	0
6	0	0	0	0	0	0	26	0	0	0	0	0
7	0	0	0	0	0	0	6	44	0	0	0	0
8	0	0	0	0	0	0	3	21	12	0	0	0
9	0	0	0	0	0	12	11	0	0	0	0	0
10	0	0	0	2	0	0	2	0	1	0	4	0
11	0	0	0	0	29	0	11	0	2	0	0	0
12	0	0	0	0	0	31	5	11	0	0	0	0
13	0	0	0	0	0	0	1	3	0	0	0	0
14	0	0	5	0	0	0	0	3	2	23	0	0
15	0	0	48	18	61	0	0	3	0	0	0	1
16	0	0	1	0	4	0	25	3	6	0	0	0
17	0	0	0	0	5	0	15	1	0	0	0	0
18	0	0	0	0	32	0	3	2	1	6	0	0
19	0	0	0	0	6	0	0	26	5	30	9	0
20	0	0	0	0	1	20	1	1	19	0	8	0
21	0	0	0	0	16	25	2	8	53	1	3	0
22	0	1	0	0	0	23	1	4	7	0	0	0
23	0	0	0	0	0	0	0	50	3	0	0	0
24	0	0	0	0	0	0	32	1	0	0	0	0
25	0	0	0	1	0	0	7	0	71	6	0	0
26	0	0	0	0	0	12	0	7	1	0	0	0
27	0	0	0	0	8	8	3	0	4	0	0	0
28	3	0	0	0	0	36	0	15	0	2	0	0
29	0		0	0	0	2	1	85	0	79	0	0
30	5		3	0	0	13	0	1	0	53	0	0
31	0		0		0		0	3		40		0

Monthly Total	8	1	57	28	162	182	179	357	227	240	45	7
Average	0.26	0.04	1.84	0.93	5.23	6.07	5.77	11.52	7.57	7.74	1.50	0.23
Max daily rain	5	1	48	18	61	36	32	85	71	79	21	6
Day of Max Daily	30	22	15	15	15	28	24	29	25	29	4	3
No. of Rain days	2	1	4	4	9	10	21	24	17	9	5	2
Max 1-hr rain	4	1	27	14	56	29	29	50	38	20	19	5
Day of max 1-hr	30	22	16	16	15	12	24	29	21	20	4	3

Total rain for the year	**1493**
Total rain days for the year	**108**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **San Rafael**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	2	10	9	3	0	1	0
2	0	0	0	0	0	0	0	0	1	1	0	0
3	0	0	0	0	0	0	0	15	13	4	2	6
4	0	0	0	5	0	5	6	58	0	0	0	1
5	0	0	0	62	0	0	9	28	0	0	0	0
6	0	0	0	1	0	0	0	0	20	0	0	0
7	0	0	0	1	0	0	2	15	0	0	0	0
8	0	0	0	0	0	0	23	6	9	0	0	0
9	0	0	0	0	0	0	16	0	6	0	0	0
10	0	0	0	0	0	0	7	0	1	13	23	0
11	0	0	0	0	0	11	0	3	0	44	1	0
12	0	0	23	9	0	0	40	17	1	0	2	0
13	0	2	5	0	0	10	0	22	0	8	0	0
14	0	0	1	0	0	19	0	0	0	0	0	1
15	0	0	5	20	74	0	0	4	0	0	0	1
16	0	0	10	0	18	4	27	0	0	0	4	7
17	0	0	0	0	8	0	52	4	0	3	1	1
18	0	0	0	0	3	0	24	0	22	2	2	0
19	0	0	2	0	13	0	1	16	2	17	11	0
20	0	0	0	0	48	2	11	14	3	0	10	0
21	0	0	0	1	0	0	0	1	1	6	1	2
22	0	7	0	0	33	40	2	3	5	1	0	0
23	0	0	0	0	44	0	6	30	0	0	0	0
24	0	0	0	0	0	0	21	0	0	0	0	0
25	0	0	0	1	0	0	0	1	87	17	0	0
26	0	0	0	0	16	0	0	4	2	0	0	0
27	5	0	0	0	18	0	0	0	5	0	0	0
28	0	0	0	0	0	8	10	13	0	11	0	0
29	0		0	0	0	0	0	63	13	101	0	0
30	0		2	0	12	12	1	1	0	2	2	0
31	0		0		0		23	0		11		0

Monthly Total	5	9	48	100	287	113	291	327	194	241	60	19
Average	0.16	0.32	1.55	3.33	9.26	3.77	9.39	10.55	6.47	7.77	2.00	0.61
Max daily rain	5	7	23	62	74	40	52	63	87	101	23	7
Day of Max Daily	27	22	12	5	15	22	17	29	25	29	10	16
No. of Rain days	1	2	7	8	11	10	19	21	17	15	12	7
Max 1-hr rain	5	3	21	12	53	19	38	35	24	19	12	4
Day of max 1-hr	27	22	12	16	15	14	17	4	25	12	11	16

Total rain for the year	**1694**
Total rain days for the year	**130**

Daily Point Rainfall in millimeters (meteorological day)

2022 Station: **PRBFFWC (CSFP)**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	0.0	0.0	0.0	0.0	0.0	11.2	2.0	2.3	0.0	0.5	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	11.9	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	1.0	0.0	3.3
4	0.0	0.0	0.0	1.8	0.0	0.0	1.0	7.4	0.3	0.0	16.3	0.0
5	0.0	0.0	0.0	11.4	0.0	0.0	8.1	14.0	17.5	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.8	22.6	0.5	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	13.7	7.1	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	10.4	27.4	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	36.8	4.6	0.0	11.7	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	5.3	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	18.3	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	19.3	9.7	0.0	0.0	0.0	0.0
13	0.0	0.0	2.8	0.0	0.0	0.0	0.0	3.8	0.0	3.6	0.3	0.0
14	0.0	0.0	0.3	0.3	3.6	2.8	0.0	1.3	0.5	5.6	0.0	0.0
15	0.0	0.0	32.3	8.4	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	7.6	0.0	4.8	0.0	0.0	0.0	2.8	0.0
17	0.0	0.0	0.0	29.5	4.1	0.0	16.8	6.1	0.0	14.2	5.6	0.8
18	0.0	0.0	0.0	0.0	11.7	0.0	8.6	6.4	0.0	0.5	0.0	0.0
19	0.8	0.0	0.0	0.0	8.9	0.0	3.0	2.8	6.6	59.2	11.4	0.0
20	0.0	0.0	0.0	0.0	0.3	0.0	15.7	0.0	6.1	0.0	6.1	0.0
21	2.5	0.0	0.0	0.0	10.2	0.0	0.5	18.0	30.0	1.5	0.0	0.0
22	0.0	1.3	0.0	0.0	1.0	25.7	1.0	8.6	0.0	15.2	0.0	0.0
23	0.0	0.0	0.0	0.0	8.4	0.0	0.0	40.6	0.8	0.0	0.0	0.0
24	0.0	0.0	0.0	0.5	0.0	0.0	22.9	0.3	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.8	0.0	0.0	18.8	0.0	91.7	7.9	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	12.7	0.3	3.3	0.5	0.0	0.0	0.0
27	8.1	0.0	0.0	0.0	1.8	0.3	18.8	0.0	4.3	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.3	37.3	23.9	26.4	0.0	7.4	0.0	0.0
29	0.0		0.0	0.0	0.0	1.5	1.5	16.0	0.5	84.8	0.0	0.0
30	1.8		2.5	0.0	0.0	15.5	0.0	6.6	0.0	8.1	0.0	0.0
31	0.0		0.0		0.0		0.0	6.1		34.3		0.0

Monthly Total	13.2	1.3	37.8	52.6	57.7	132.6	206.0	222.3	223.8	261.6	48.3	4.1
Average	0.43	0.05	1.22	1.75	1.86	4.42	6.64	7.17	7.46	8.44	1.61	0.13
Max daily rain	8.1	1.3	32.3	29.5	11.7	37.3	23.9	40.6	91.7	84.8	16.3	3.3
Day of Max Daily	27	22		17	18	28	28	23	25	29	4	3
No. of Rain days	4	1	4	7	11	8	23	23	17	14	8	2
Max 1-hr rain	7.9	1.3	17.5	26.2	8.4	23.1	23.9	22.6	27.9	25.4	8.4	1.8
Day of max 1-hr	27	22	15	18	21	9	28	12	25	19	4	3

Total rain for the year	**1261.1**
Total rain days for the year	**122**

Table 2.0

Monthly Rainfall Summary for 2022															
PRB Station	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total for the year**	**Number of RR days**	**Max 24-hr RR (Met day)**
Muñoz	18	5	10	2	148	261	207	250	215	264	42	8	1430	119	100
Sapang Buho	69	9	18	33	205	168	186	170	444	111	49	26	1488	119	93
Gabaldon	52	94	43	68	217	134	296	309	401	517	182	61	2374	195	218
Zaragoza	44	3	26	6	138	69	155	191	215	168	22	3	1040	107	60
Mayapyap	37	9	10	64	197	135	217	192	239	134	74	1	1309	116	109
Peñaranda	48	13	17	31	305	145	252	305	529	115	74	11	1845	128	146
Calaanan	35	15	31	11	110	150	209	155	366	225	48	42	1397	117	83
Palali	27	35	58	79	299	113	205	113	339	190	82	31	1571	133	108
San Isidro	28	6	3	20	100	35	217	247	291	110	69	6	1132	103	112
Arayat	0	3	6	81	76	92	197	318	320	131	71	12	1307	95	134
Candaba	7	0	4	0	88	62	182	245	266	193	77	12	1136	111	70
Sibul Spring	15	30	39	159	268	124	166	396	379	239	118	28	1961	148	166
Sasmuan	0	3	15	85	104	244	141	377	273	257	19	9	1527	107	104
Sulipan	7	6	9	56	161	102	202	282	176	182	29	14	1226	130	86
Mexico	8	0	18	61	126	144	255	284	193	149	48	6	1292	122	96
Porac	8	1	57	28	162	182	179	357	227	240	45	7	1493	108	85
San Rafael	5	9	48	100	287	113	291	327	194	241	60	19	1694	130	101
PRFFWC	13.2	1.3	37.8	52.6	57.7	132.6	206.0	222.3	223.8	261.6	48.3	4.1	1261.1	122	91.7

Note: Red values indicate incomplete data for the said station

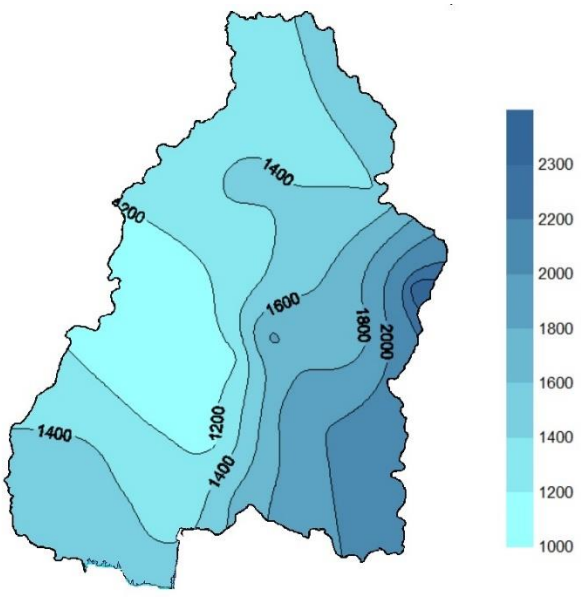


Figure 2.0 The estimated annual rainfall distribution (Isohyets) for year 2022 in the PRB

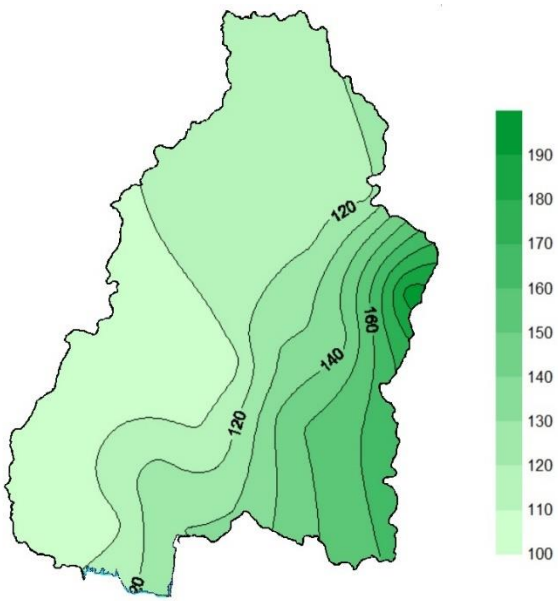


Figure 2.1 Estimated rainfall days distribution in the PRB for the year 2022

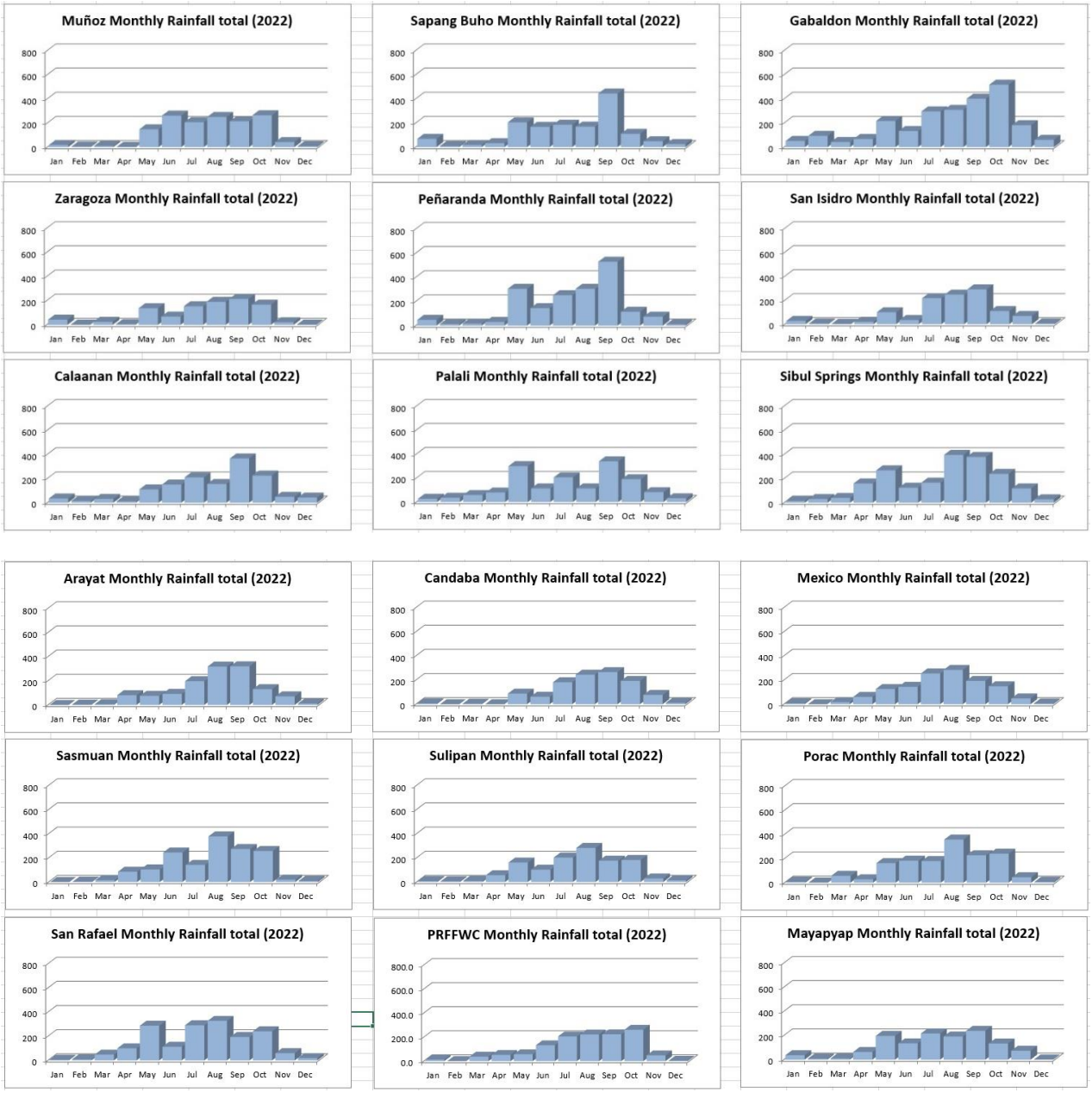


Figure 3.0 Monthly Rainfall distribution (hyetograph) of each monitoring station of the PRBFFWC within the Pampanga River Basin for the year 2022.

B. WATER LEVEL Data Summary Presentation

A still flooded Candaba-San Miguel road (Dukma) with Candaba telemetry station WL at 5.49m; this was just after TC "Karding" (1023H, 01 Oct 2022)

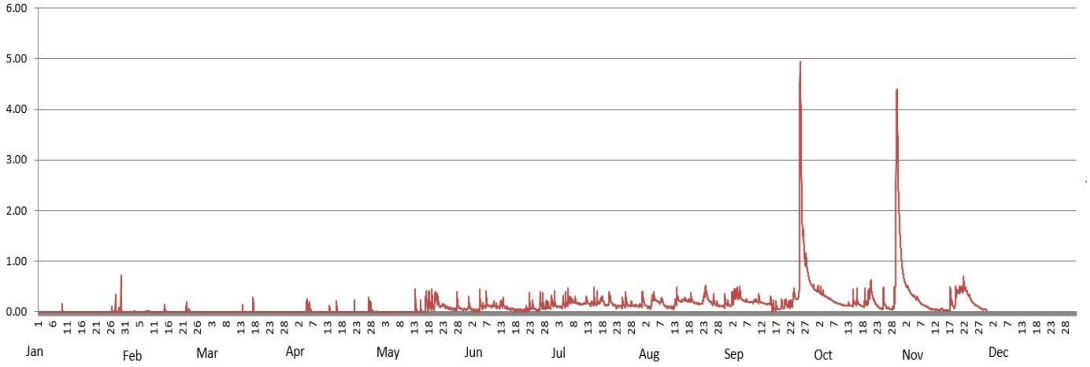
Pampanga River at Arayat station
WL at 7.98m (during TC Karding)
1100H, 26 September 2022

Water Level in meters (Daily Average)

2022 Station: **Sapang_Buho**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.14	0.17	0.24	0.17	0.41	0.62	0.03
2	0.00	0.00	0.00	0.00	0.00	0.05	0.11	0.13	0.28	0.42	0.49	0.02
3	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.10	0.35	0.37	0.39	0.04
4	0.00	0.00	0.00	0.00	0.00	0.03	0.15	0.17	0.35	0.32	0.32	0.15
5	0.00	0.00	0.00	0.03	0.00	0.07	0.16	0.22	0.30	0.30	0.30	0.10
6	0.00	0.00	0.00	0.06	0.00	0.10	0.21	0.21	0.21	0.25	0.23	0.03
7	0.00	0.00	0.00	0.00	0.00	0.15	0.22	0.19	0.20	0.21	0.16	0.03
8	0.00	0.02	0.00	0.00	0.00	0.13	0.20	0.22	0.19	0.18	0.13	0.02
9	0.02	0.00	0.00	0.00	0.00	0.11	0.18	0.12	0.20	0.16	0.10	0.02
10	0.00	0.00	0.00	0.00	0.00	0.12	0.16	0.10	0.21	0.14	0.07	0.01
11	0.00	0.00	0.00	0.00	0.00	0.11	0.16	0.09	0.22	0.13	0.05	0.02
12	0.00	0.00	0.00	0.00	0.00	0.13	0.20	0.12	0.18	0.14	0.04	0.01
13	0.00	0.00	0.02	0.01	0.07	0.13	0.17	0.27	0.17	0.12	0.04	0.00
14	0.00	0.04	0.00	0.00	0.00	0.09	0.16	0.22	0.16	0.18	0.05	0.01
15	0.00	0.00	0.00	0.02	0.04	0.07	0.20	0.22	0.17	0.20	0.04	0.05
16	0.00	0.00	0.00	0.01	0.00	0.05	0.20	0.25	0.07	0.15	0.03	0.06
17	0.00	0.00	0.05	0.00	0.18	0.04	0.21	0.22	0.08	0.12	0.13	0.02
18	0.00	0.00	0.00	0.00	0.20	0.04	0.23	0.25	0.06	0.17	0.14	0.00
19	0.00	0.00	0.00	0.00	0.20	0.04	0.14	0.19	0.13	0.24	0.25	0.00
20	0.00	0.00	0.00	0.00	0.23	0.03	0.19	0.17	0.16	0.41	0.40	0.00
21	0.00	0.00	0.00	0.00	0.22	0.04	0.20	0.16	0.12	0.28	0.43	0.06
22	0.00	0.06	0.00	0.01	0.11	0.11	0.13	0.20	0.12	0.15	0.51	0.02
23	0.00	0.01	0.00	0.00	0.13	0.10	0.11	0.38	0.30	0.09	0.39	0.00
24	0.00	0.00	0.00	0.00	0.10	0.07	0.12	0.27	0.26	0.07	0.29	0.00
25	0.00	0.00	0.00	0.00	0.08	0.04	0.16	0.18	1.94	0.21	0.19	0.00
26	0.01	0.00	0.00	0.00	0.07	0.14	0.20	0.20	2.27	0.08	0.13	0.00
27	0.00	0.00	0.00	0.07	0.06	0.13	0.13	0.16	1.12	0.06	0.10	0.00
28	0.05	0.00	0.00	0.02	0.16	0.10	0.15	0.12	0.79	0.12	0.07	0.00
29	0.01		0.00	0.00	0.08	0.10	0.13	0.11	0.57	2.46	0.05	0.06
30	0.06		0.00	0.00	0.05	0.15	0.12	0.16	0.48	2.29	0.04	0.00
31	0.00		0.00		0.05		0.12	0.15		1.03		0.00
Max WL observed	0.72	0.19	0.29	0.28	0.46	0.46	0.48	0.52	4.94	4.40	0.75	0.40
Day of Max WL	30	22	17	27	13	5	15	23	26	30	1	4

Sapang Buho WL 2022

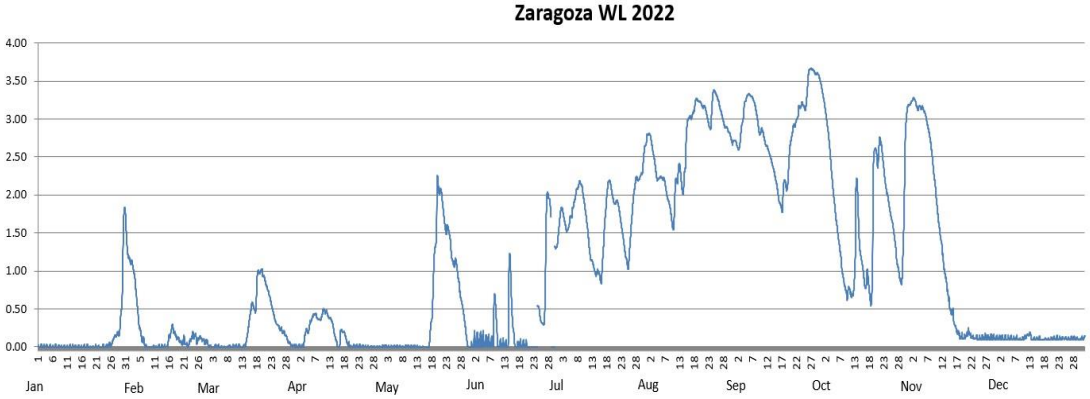


Water Level in meters (Daily Average)

2022 Station: **Zaragoza**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	1.23	0.03	0.01	0.01	0.01	1.51	2.77	2.67	3.35	3.22	0.12
2	0.01	1.12	0.00	0.01	0.01	0.07	1.81	2.76	2.64	3.12	3.26	0.12
3	0.01	0.98	0.01	0.03	0.00	0.07	1.68	2.55	2.93	2.82	3.15	0.11
4	0.00	0.63	0.01	0.20	0.00	0.07	1.55	2.30	3.21	2.39	3.16	0.11
5	0.00	0.45	0.01	0.22	0.01	0.07	1.61	2.26	3.26	2.17	3.15	0.11
6	0.00	0.10	0.00	0.37	0.01	0.05	1.82	2.22	3.31	1.61	3.03	0.11
7	0.01	0.02	0.00	0.43	0.00	0.05	2.01	2.17	3.24	1.30	2.84	0.11
8	0.00	0.00	0.01	0.38	0.00	0.11	2.13	1.97	3.07	0.98	2.59	0.11
9	0.00	0.00	0.00	0.37	0.01	0.54	2.12	1.80	2.84	0.76	2.23	0.10
10	0.00	0.00	0.01	0.47	0.01	0.04	1.90	1.64	2.84	0.73	1.83	0.11
11	0.00	0.00	0.01	0.46	0.01	0.02	1.59	2.16	2.69	0.69	1.49	0.14
12	0.01	0.01	0.01	0.39	0.01	0.03	1.23	2.34	2.60	0.87	1.18	0.17
13	0.01	0.01	0.01	0.33	0.00	0.03	1.09	2.12	2.48	2.04	0.90	0.11
14	0.00	0.00	0.05	0.16	0.00	0.93	0.97	2.33	2.32	1.35	0.62	0.10
15	0.00	0.08	0.28	0.03	0.00	0.36	0.97	2.95	2.14	1.04	0.47	0.11
16	0.00	0.21	0.53	0.14	0.00	0.02	0.96	3.02	1.92	0.83	0.32	0.11
17	0.01	0.21	0.50	0.19	0.08	0.01	1.54	3.09	1.90	0.87	0.20	0.09
18	0.01	0.13	0.86	0.10	0.54	0.03	2.04	3.25	2.15	0.67	0.14	0.10
19	0.00	0.08	0.99	0.02	1.30	0.03	2.15	3.23	2.25	2.43	0.12	0.10
20	0.00	0.07	0.95	0.00	2.10	0.03	1.96	3.18	2.71	2.49	0.15	0.11
21	0.00	0.06	0.84	0.01	2.03	0.00	1.90	3.15	2.89	2.68	0.19	0.11
22	0.00	0.02	0.71	0.01	1.74	0.00	1.83	3.00	2.99	2.49	0.13	0.11
23	0.01	0.12	0.55	0.01	1.55		1.57	2.94	3.14	2.14	0.12	0.11
24	0.01	0.15	0.39	0.01	1.47	0.51	1.30	3.34	3.20	1.92	0.11	0.11
25	0.03	0.10	0.29	0.01	1.15	0.34	1.10	3.32	3.16	1.70	0.12	0.11
26	0.03	0.12	0.24	0.00	1.11	0.46	1.40	3.19	3.51	1.47	0.12	0.11
27	0.11	0.10	0.20	0.00	0.93	1.87	1.91	3.04	3.66	1.13	0.12	0.11
28	0.16	0.07	0.14	0.00	0.64	1.89	2.19	2.91	3.63	0.90	0.12	0.12
29	0.24		0.06	0.00	0.41		2.21	2.86	3.60	1.20	0.12	0.11
30	0.95		0.02	0.00	0.11	1.31	2.29	2.76	3.53	2.73	0.12	0.11
31	1.70		0.01		0.00		2.59	2.70		3.18		0.12

Max WL observed	1.83	1.41	1.02	0.51	2.26	2.04	2.67	3.38	3.67	3.45	3.28	0.19
Day of Max WL	31	1	20	10	20	28	Aug 01	24	27	10	2	13

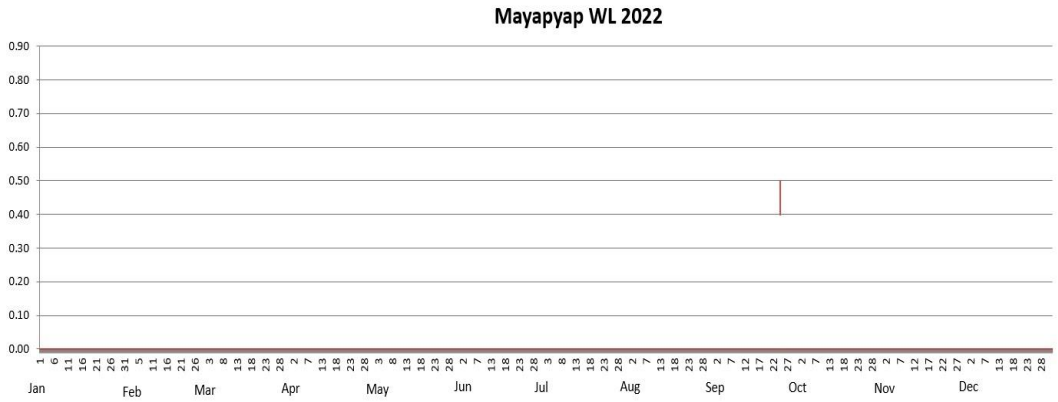


Water Level in meters (Daily Average)

2022 Station: **Mayapyap**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24									0.51			
25									0.50			
26												
27												
28												
29												
30												
31												

Max WL observed									0.80			
Day of Max WL									24			



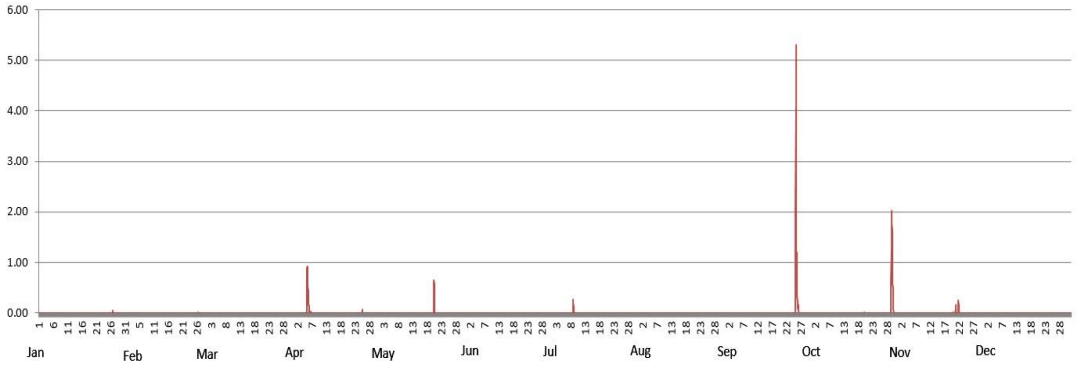
Water Level in meters (Daily Average)

2022 Station: **Peñaranda**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00
30	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
31	0.00		0.00		0.00		0.00	0.00		0.00		0.00

Max WL observed	0.05	0.01		0.91	0.64		0.26		5.30	2.03	0.25	
Day of Max WL	27	26		6	21		9		26	29	22	

Peñaranda WL 2022



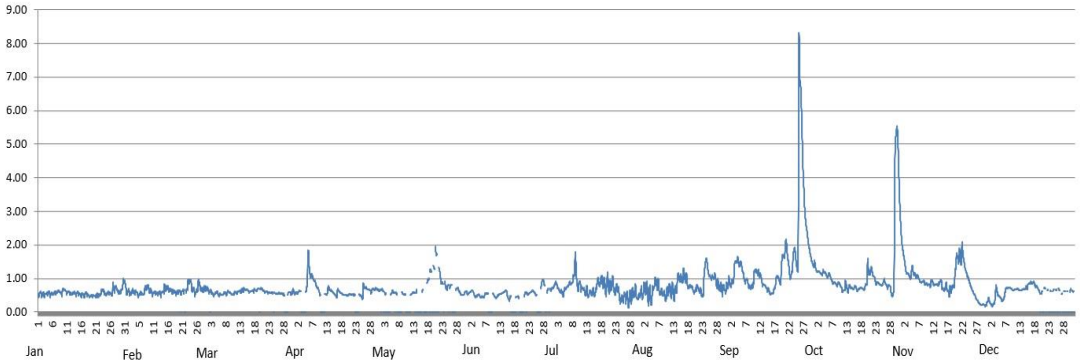
Water Level in meters (Daily Average)

2022 Station: **San_Isidro**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.54	0.62	0.69	0.56	0.65	0.55	0.76	0.55	0.86	1.37	1.84	0.34
2	0.54	0.55	0.62	0.58	0.65	0.63	0.83	0.65	0.90	1.21	1.28	
3	0.52	0.62	0.54	0.63	0.55	0.54	0.65	0.58	1.45	1.16	1.11	
4	0.57	0.60	0.55			0.48	0.57	0.48	1.50	1.19	1.20	
5	0.55	0.56	0.54	0.76	0.58	0.48	0.62	0.56	1.46	1.15	1.17	
6	0.56	0.54	0.52	1.43	0.58	0.45	0.77	0.90	1.03	1.10	1.06	
7	0.59	0.63	0.56	1.06	0.55	0.53	0.85	0.73	0.94	0.93	0.92	
8	0.61	0.75	0.57	0.89		0.55	1.03	0.59	0.74	0.87	0.91	
9	0.60	0.64	0.58	0.71	0.55		1.21	0.49	0.81	0.84	0.85	
10	0.65	0.56	0.53	0.53	0.52	0.50	0.81	0.53	1.21	0.78	0.82	
11	0.59	0.58	0.58			0.45	0.70	0.67	1.16	0.64	0.89	
12	0.56	0.57	0.61	0.54	0.54	0.53	0.62	0.61	1.04	0.79	0.82	
13	0.57	0.56	0.64	0.71	0.58	0.57	0.56	0.65	0.80	0.72	0.81	
14	0.56	0.69	0.68	0.61	0.61	0.62	0.58	1.04	0.70	0.70	0.91	
15	0.54	0.71	0.67	0.52		0.44	0.58	0.98	0.61	0.74	0.72	
16	0.52	0.66	0.61	0.59	0.64	0.44	0.69	1.09	0.57	0.66	0.73	
17	0.53	0.63	0.63	0.58	0.87		0.87	0.90	0.82	0.71	0.57	
18	0.52	0.58	0.66	0.52	1.00	0.46	0.94	0.76	1.03	0.68	0.70	
19	0.48	0.62	0.69	0.50	1.24	0.45	0.79	0.68	1.11	0.84	0.88	
20	0.48	0.58	0.70	0.52	1.42		0.87	0.67	1.67	1.24	1.58	
21	0.51	0.64	0.63	0.52	1.72	0.53	0.73	0.69	1.93	1.23	1.60	
22	0.51	0.73	0.60	0.51	1.12	0.54	0.82	0.58	1.25	1.00	1.76	
23	0.64	0.91	0.58	0.53	0.88	0.60	0.69	1.00	1.34	0.87	1.28	
24	0.56	0.69	0.57	0.50	0.77	0.60	0.53	1.44	1.76	0.80	1.00	
25	0.57	0.59	0.56	0.63	0.78	0.51	0.41	1.07	3.20	0.88	0.74	
26	0.54	0.80	0.55	0.71	0.80		0.45	1.03	6.52	0.82	0.55	
27	0.68	0.71	0.56	0.67	0.66	0.89	0.39	0.97	3.94	0.77	0.37	
28	0.72	0.70	0.52	0.64	0.70	0.81	0.39	0.82	2.54	0.56	0.25	
29	0.62		0.52	0.68	0.58	0.64	0.56	0.71	1.91	2.73	0.22	
30	0.67		0.59	0.68	0.52	0.67	0.58	0.70	1.49	5.18	0.20	
31	0.88		0.59		0.59		0.46	0.71		3.03		0.62

Max WL observed	0.99	0.98	0.76	1.83	1.94	0.98	1.79	1.60	8.32	5.55	2.17	0.92
Day of Max WL	31	23	1	6	21	28	9	24	26	30	1	17

San Isidro WL 2022



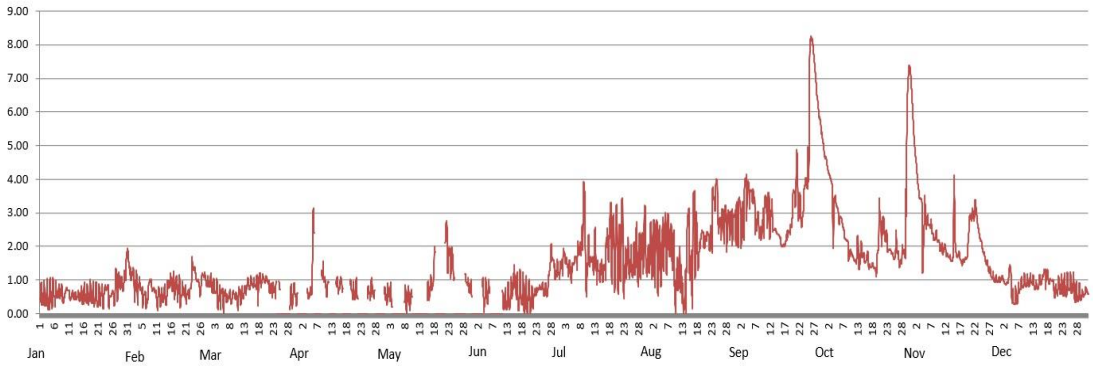
Water Level in meters (Daily Average)

2022 Station: **Arayat**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.51	1.31	0.94		0.53		1.40	1.94	3.01	4.64	5.07	1.03
2	0.56	1.16	0.74		0.59		1.70	1.90	2.85	4.25	4.05	0.98
3	0.51	0.89	0.71		0.48		1.49	1.97	3.55	3.94	3.45	0.89
4	0.44	0.80	0.46	0.56		0.54	1.36	1.65	3.67	2.98	2.19	1.25
5	0.49	0.74	0.51	0.61		0.57	1.34	1.71	3.61	3.08	2.55	0.94
6	0.56	0.52	0.46	2.53		0.69	1.62	2.20	3.35	2.83	2.67	0.43
7	0.58	0.42	0.45	0.72			1.79	2.24	2.65	2.65	2.51	0.52
8	0.66	0.98	0.47	0.66	0.38		2.11	2.16	2.57	2.22	2.23	0.82
9	0.45	0.74	0.57	1.15	0.47		3.21	1.72	2.59	1.85	2.23	0.93
10	0.70	0.58	0.51	0.86	0.49		1.19	0.83	3.24	1.82	1.96	0.91
11	0.55	0.52	0.51	0.84		0.39	1.70	1.23	3.23	1.61	1.91	0.93
12	0.57	0.46	0.52			0.38	1.49	0.81	2.86	1.90	1.86	0.95
13	0.48	0.54	0.66			0.42	1.69	0.36	2.51	1.62	1.70	0.83
14	0.52	0.67	0.87	0.91		0.74	1.29	2.38	2.42	1.76	1.61	0.82
15	0.53	0.93	0.89	0.84		0.95	1.35	1.46	2.30	1.58	2.69	1.00
16	0.49	0.89	0.88	0.81	0.62	0.51	1.37	2.35	2.03	1.52	1.74	1.23
17	0.48	0.79	0.91		0.85	0.64	2.07	2.22	2.13	1.41	1.62	1.14
18	0.58	0.73	0.90		1.55	0.49	2.51	1.75	2.39	1.37	1.54	0.97
19	0.49	0.60	1.00	0.76		0.48	2.05	2.36	2.60	1.60	1.67	0.97
20	0.50	0.61	1.01	0.58		0.52	2.09	2.10	3.52	2.81	2.59	0.64
21	0.43	0.57	0.96	0.68		0.44	1.75	2.32	4.06	2.61	2.95	0.84
22	0.54	0.69	0.74		2.41	0.59	2.32	2.27	3.21	2.32	3.09	0.79
23	0.52	1.39	0.69		1.70	0.72	1.16	3.37	2.85	1.88	2.66	0.78
24	0.75	1.13	0.76		1.64	0.76	1.69	3.69	3.86	1.83	2.19	0.76
25	0.43	0.85	0.80	0.64	1.05	0.68	1.40	2.70	4.70	1.70	1.82	0.84
26	0.60	0.97		0.73		0.66	1.43	2.85	8.14	1.93	1.52	0.83
27	0.90	1.12		0.60		1.34	1.82	2.81	7.64	1.50	1.29	0.55
28	0.92	0.91				1.68	1.61	2.64	6.58	1.85	1.11	0.54
29	0.84		0.49		0.99	1.21	1.80	2.67	5.80	3.60	1.00	0.52
30	0.96		0.59		0.80	1.29	2.33	2.65	5.18	7.14	0.99	0.58
31	1.68		0.49		0.71		1.55	2.87		6.58		0.67

Max WL observed	1.93	1.69	1.21	3.13	2.76	2.09	3.92	4.00	8.26	7.39	5.73	1.46
Day of Max WL	Feb 01	23	2	6	22	28	9	24	26	31	1	5

Arayat WL 2022

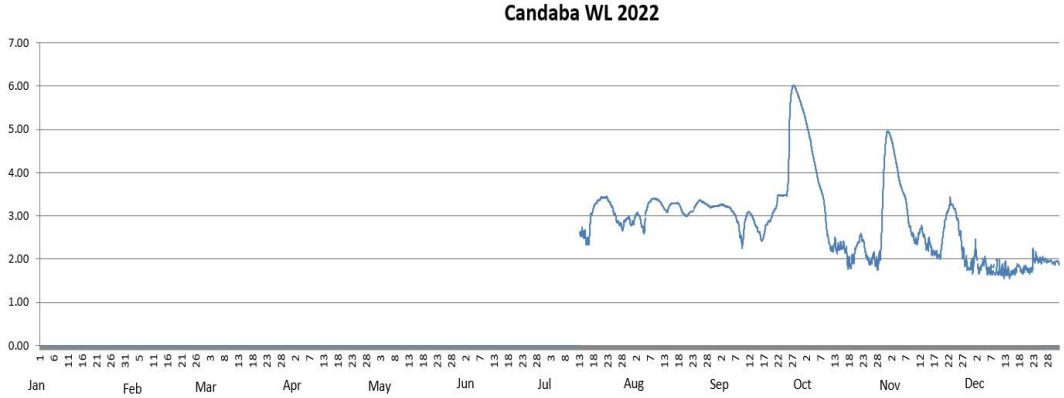


Water Level in meters (Daily Average)

2022 Station: **Candaba**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1								2.85	3.25	5.41	4.87	1.95
2								3.02	3.26	5.17	4.63	2.12
3								3.01	3.23	4.89	4.30	1.74
4								2.81	3.21	4.55	3.95	1.90
5								2.78	3.18	4.39	3.81	1.92
6								3.19	3.07	3.90	3.49	1.72
7								3.34	2.93	3.66	3.21	1.75
8								3.39	2.68	3.43	2.78	1.70
9								3.39	2.42	2.92	2.57	1.76
10								3.37	2.82	2.44	2.43	1.76
11								3.30	3.06	2.24	2.47	1.74
12								3.19	3.06	2.34	2.70	1.72
13							2.57	3.12	2.94	2.24	2.56	1.71
14							2.59	3.22	2.77	2.29	2.32	1.64
15							2.47	3.29	2.64	2.31	2.36	1.69
16							2.44	3.29	2.46	2.22	2.19	1.72
17							3.00	3.28	2.62	1.93	2.15	1.85
18							3.21	3.19	2.82	1.90	2.09	1.73
19							3.32	3.06	2.89	2.04	2.12	1.79
20							3.38	3.01	3.06	2.30	2.56	1.76
21							3.43	3.06	3.19	2.46	2.97	1.74
22							3.43	3.11	3.44	2.48	3.17	1.94
23							3.38	3.20	3.47	2.23	3.27	2.01
24							3.26	3.31	3.47	2.02	3.17	1.99
25							3.10	3.36	3.54	1.94	2.95	1.99
26							2.93	3.33	4.94	2.06	2.61	1.99
27							2.83	3.28	5.94	1.91	2.18	1.97
28							2.74	3.23	5.97	1.95	1.94	1.95
29							2.87	3.21	5.81	2.73	1.79	1.92
30							2.95	3.22	5.62	4.27	1.87	1.92
31							2.86	3.23		4.91		1.93

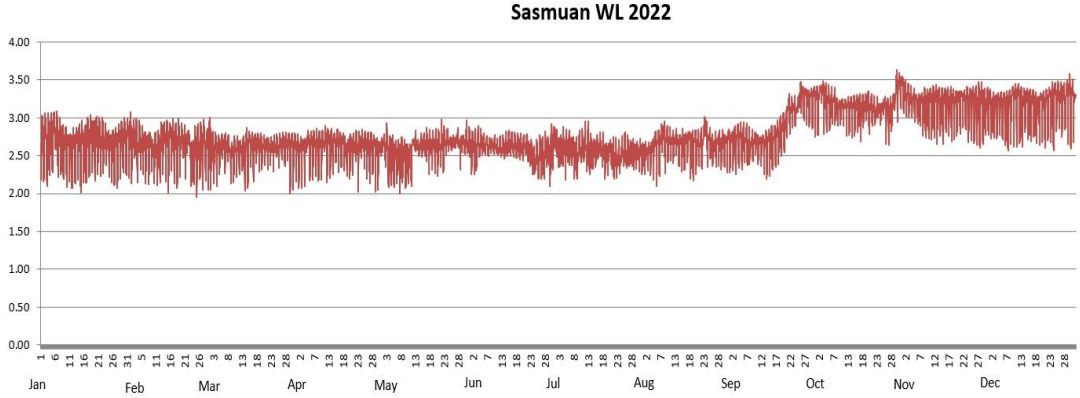
Max WL observed							3.45	3.41	6.03	5.51	4.94	2.47
Day of Max WL							23	9	28	1	1	2



Water Level in meters (Daily Average)

2022 Station: **Sasmuan**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.69	2.73	2.62	2.59	2.63	2.67	2.70	2.52	2.65	3.22	3.37	3.15
2	2.70	2.65	2.54	2.54	2.61	2.60	2.57	2.55	2.72	3.23	3.29	3.10
3	2.65	2.75	2.56	2.58	2.49	2.54	2.56	2.53	2.70	3.37	3.26	3.12
4	2.71	2.63	2.57	2.59	2.49	2.64	2.61	2.59	2.73	3.24	3.23	3.16
5	2.73	2.66	2.58	2.65	2.47	2.65	2.61	2.62	2.72	3.22	3.22	3.15
6	2.81	2.66	2.65	2.61	2.46	2.65	2.58	2.61	2.68	3.18	3.19	3.11
7	2.69	2.64	2.61	2.60	2.40	2.64	2.62	2.63	2.65	3.19	3.18	3.12
8	2.63	2.55	2.61	2.62	2.50	2.63	2.46	2.81	2.66	3.15	3.19	3.11
9	2.63	2.54	2.50	2.60	2.41	2.63	2.49	2.65	2.66	3.13	3.14	3.23
10	2.59	2.58	2.53	2.63	2.42	2.62	2.60	2.68	2.69	3.15	3.16	3.26
11	2.62	2.62	2.58	2.72	2.44	2.61	2.61	2.66	2.63	3.14	3.19	3.24
12	2.53	2.63	2.57	2.62	2.66	2.61	2.62	2.66	2.65	3.14	3.19	3.17
13	2.60	2.74	2.61	2.63	2.65	2.60	2.59	2.68	2.64	3.11	3.16	3.14
14	2.68	2.69	2.62	2.66	2.61	2.63	2.52	2.65	2.65	3.14	3.17	3.19
15	2.67	2.67	2.61	2.70	2.64	2.65	2.54	2.66	2.67	3.11	3.18	3.14
16	2.67	2.70	2.64	2.67	2.65	2.65	2.59	2.63	2.69	3.12	3.19	3.15
17	2.67	2.67	2.63	2.66	2.67	2.61	2.62	2.74	2.73	3.14	3.19	3.17
18	2.71	2.63	2.65	2.59	2.61	2.63	2.56	2.64	2.80	3.12	3.16	3.10
19	2.78	2.67	2.64	2.57	2.65	2.63	2.51	2.61	2.84	3.18	3.18	3.18
20	2.73	2.69	2.63	2.58	2.60	2.65	2.56	2.62	2.87	3.12	3.20	3.17
21	2.72	2.64	2.64	2.59	2.63	2.63	2.55	2.66	3.11	3.10	3.22	3.17
22	2.71	2.66	2.60	2.65	2.67	2.52	2.44	2.67	3.08	3.07	3.21	3.19
23	2.65	2.43	2.60	2.59	2.67	2.48	2.46	2.87	3.12	3.11	3.19	3.19
24	2.67	2.54	2.63	2.66	2.69	2.43	2.47	2.67	3.08	3.09	3.16	3.22
25	2.62	2.58	2.64	2.67	2.67	2.45	2.55	2.64	3.27	3.18	3.17	3.28
26	2.69	2.65	2.64	2.65	2.68	2.49	2.53	2.65	3.35	3.08	3.15	3.26
27	2.61	2.62	2.67	2.61	2.70	2.48	2.51	2.61	3.26	3.08	3.16	3.24
28	2.63	2.63	2.66	2.62	2.70	2.56	2.50	2.66	3.26	3.16	3.16	3.22
29	2.69		2.67	2.57	2.63	2.44	2.53	2.66	3.25	3.39	3.13	3.28
30	2.75		2.59	2.56	2.65	2.60	2.53	2.65	3.26	3.43	3.16	3.29
31	2.67		2.55		2.69		2.54	2.70		3.46		3.25
Max WL observed	3.09	3.08	3.00	2.90	2.98	2.92	2.96	3.02	3.48	3.63	3.51	3.58
Day of Max WL	7	2	2	11	22	30	12	23	26	30	1	30



Water Level in meters (Daily Average)

2022 Station: **Sulipan**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1				2.27				1.67	1.95	2.95		
2								1.69		2.81		
3								1.70		2.71		
4								1.71		2.48		
5								1.69		2.34		
6								1.59	2.33	2.06		
7								1.60	2.28	1.99		
8								1.95	2.28	1.92		
9								1.22	2.27	1.86	1.61	
10								1.84	2.35	1.88		
11								1.76	2.36	1.88		
12								1.63	2.32	1.94		
13								1.71	2.29	1.99		
14								1.76	2.25			
15								1.53	2.24			
16								1.71	2.23			
17									2.24	2.17		
18									2.25			
19									2.26			
20							1.66		2.32			
21							1.72		2.36			
22							1.71		2.29			
23							1.68		2.27			
24							1.68		2.39			
25							1.72		2.67			
26							1.70		3.36			
27							1.66		3.45			
28							1.68		3.40			
29							1.63		3.29			
30							1.59		3.13		1.11	
31			2.53				1.68					

Max WL observed			2.57	2.30			2.23	2.12	3.52	3.16	1.61	
Day of Max WL			Mar 01	1			28	1	26	2	9	

Sulipan WL 2022

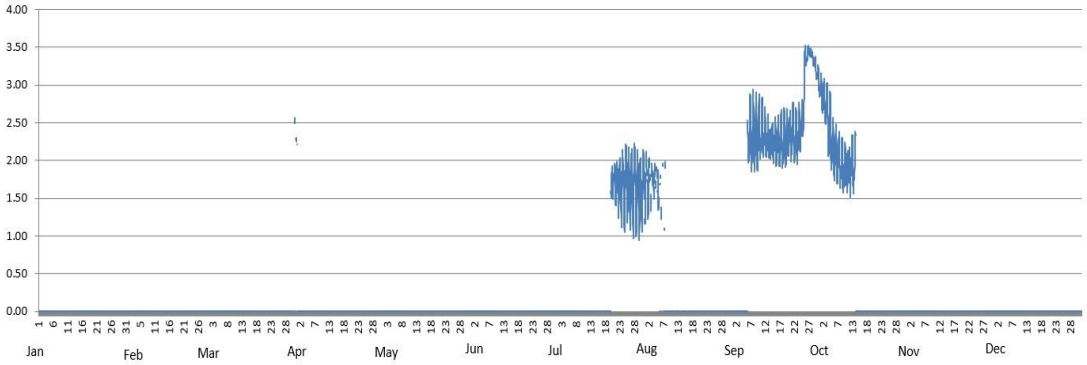


Table 3.0 Maximum WL recorded per station for the year 2022

Station	January	February	March	April	May	June	July	August	September	October	November	December
Sapang Buho	0.72	0.19	0.29	0.28	0.46	0.46	0.48	0.52	4.94	4.40	0.75	0.40
Zaragoza	1.83	1.41	1.02	0.51	2.26	2.04	2.67	3.38	3.67	3.45	3.28	0.19
Mayapyap									0.80			
Penaranda	0.05	0.01		0.91	0.64		0.26		5.30	2.03	0.25	
San Isidro	0.99	0.98	0.76	1.83	1.94	0.98	1.79	1.60	8.32	5.55	2.17	0.92
Arayat	1.93	1.69	1.21	3.13	2.76	2.09	3.92	4.00	8.26	7.39	5.73	1.46
Candaba							3.45	3.41	6.03	5.51	4.94	2.47
Sasmuan	3.09	3.08	3.00	2.90	2.98	2.92	2.96	3.02	3.48	3.63	3.51	3.58
Sulipan			2.57	2.30			2.23	2.12	3.52	3.16	1.61	
Mexico												

Sapang Buho RR-WL Telemetry Station
(04 Mar 2022)

C. ANNEX

Table A-1.

Maximum Rainfall for a given sliding time period during the year 2022

	Rainfall Stations																
Sliding time period (minimum time period of 1 hour)	Munoz	Sapang Buho	Gabaldon	Mayapyap	Zaragoza	Peñaranda	Calaanan	Palali	San Isidro	Arayat	Candaba	Sibul Spring	Sasmuan	Sulipan	Mexico	Porac	San Rafael
1 hr	62	51	67	55	38	64	45	46	60		30	60	62	43	28	56	53
2 hrs	65	88	109	60	59	79	46	67	64		38	64	67	53	48	84	67
3 hrs	65	92	117	64	60	89	46	73	74		43	74	90	57	52	84	67
4 hrs	65	93	139	71	60	99	47	75	82		46	82	90	57	59	84	68
5 hrs	66	93	158	79	60	107	50	75	86		49	86	90	57	72	84	74
6 hrs	88	93	172	81	60	116	55	82	93		54	93	90	57	79	84	74
7 hrs	97	93	186	82	60	125	63	89	94		55	94	90	57	83	84	74
8 hrs	99	93	191	85	60	133	70	95	99		59	99	90	57	86	84	76
9 hrs	100	93	198	100	60	137	75	97	104		62	104	90	57	87	84	79
10 hrs	100	93	203	103	60	140	79	100	108		64	108	90	59	88	84	81
11 hrs	100	93	204	107	60	143	80	101	109		65	109	90	63	88	84	82
12 hrs	100	93	205	108	60	143	80	102	109		66	109	90	67	92	85	83
18 hrs	100	93	230	109	60	146	83	108	112		70	112	102	82	96	85	98
24 hrs	100	93	257	109	60	146	86	113	112		72	112	107	88	96	93	105
48 hrs (2 days)	100	129	272	116	61	158	100	130	120		84	120	129	105	105	157	113
72 hrs (3 days)	121	135	274	133	70	169	104	141	121		99	121	145	120	110	174	123
96 hrs (4 days)	126	162	278	134	92	178	111	180	123		99	123	166	122	112	174	126
120 hrs (5 days)	132	203	286	154	103	188	120	213	126		101	126	178	122	124	174	138
144 hrs (6 days)	155	230	292	174	107	197	126	244	128		110	128	179	124	129	179	164
240 hrs (10 days)	180	301	325	187	131	271	219	265	171		139	171	214	149	143	195	241
480 hrs (20 days)	258	364	504	207	185	426	253	322	231		237	231	295	242	219	253	289
Meteorological day (8 am to 8 am)	100	93	218	109	60	146	83	108	112		70	112	104	86	96	85	101

The maximum monthly total values for some stations may present a smaller value than their respective 480 hours (20 days) of unrestricted sliding time total. This means that the 20-day total have transcended 2 adjacent months. Likewise, the 24-hour unrestricted sliding time period will normally be much higher than the maximum meteorological day (fixed 8am to 8am) total.

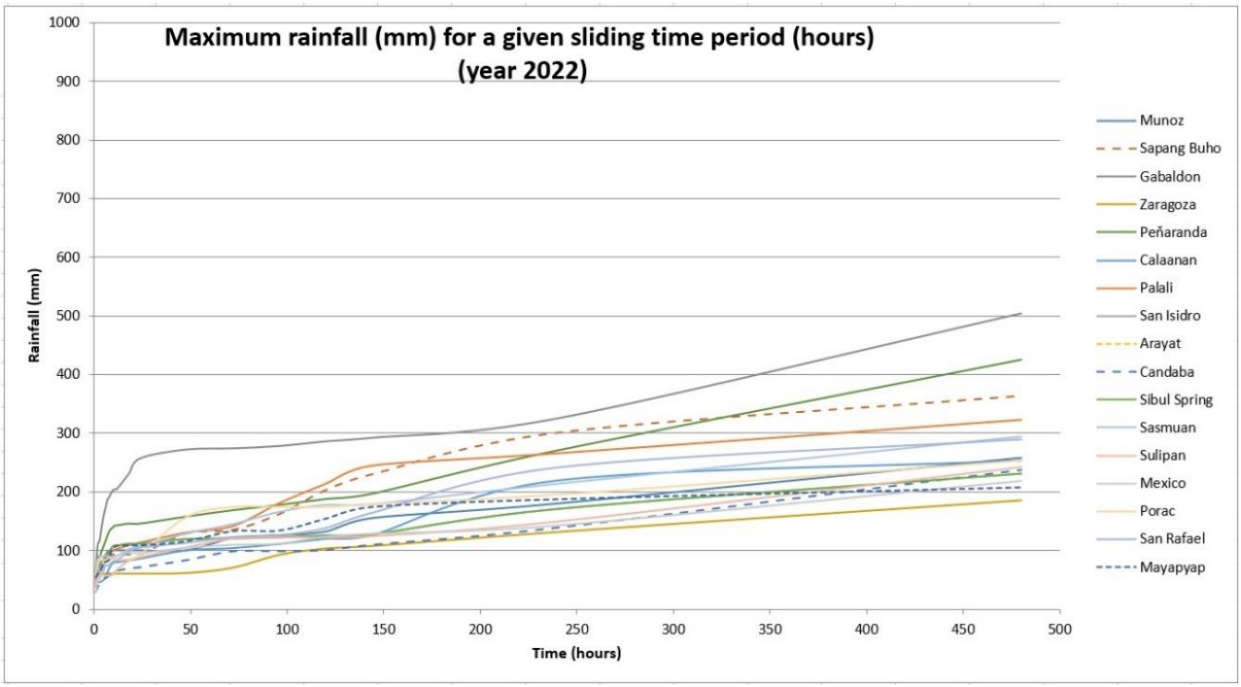


Figure AA-1. The sliding time period per station graph (2022)

Table A-2. PRBFFWC Existing Flood Warning Assessment Levels (SG in meters) as of 2021

Color code	YELLOW	ORANGE	RED
STATION	**ALERT**	**ALARM**	**CRITICAL**
Sapang Buho	**3.70**	**4.50**	**6.50**
Mayapyap +			
Zaragoza	**2.50**	**4.00**	**5.00**
Peñaranda +	**2.50**	**3.50**	**4.50**
San Isidro	**5.00**	**6.00**	**8.00**
Arayat	**5.00**	**6.00**	**8.50**
Candaba	**3.50**	**4.50**	**5.00**
Mexico +	**2.00**	**2.50**	**3.00**
Sasmuan +			**3.50 ***
Sulipan	**2.60**	**3.20**	**3.80**

+ for updating of assessment levels
(Red text) Sasmuan Critical WL assessment value is still for validation
(Blue text) Peñaranda & Mexico WL initial assessment levels (for updating)

Table A-3. Water Level Station notes

Water Level Station	Elevation of "0" of Staff Gauge (m) (as of Aug. 2009)	Rating Curve (RC) Equation as of April 2009	RC range of applicability
Sapang Buho	50.212	Q = 4.015 (H–(-2.94))^2.961*	0 < H <= 3.4
Zaragoza	10.213	Q = 12.111 (H - 0.0)^2	(for validation)
Peñaranda	22.498**	Q = 2.30 (H - (-1.20))^2	0 < H <= 4.0
San Isidro	9.585	Q = 15.2 (H - (-1.70))^2	0 < H <= 8.0
Arayat	0.077	Q = 9.106 (H - (-0.39))^2	0 < H <= 9.0
Candaba	-0.157	Q = 1.80 (H - (-1.30))^2	0 < H <= 2.0
Sasmuan	-1.147	Q = 1.50 (H- (-2.0))^2	0 < H <= 2.0
Sulipan	-0.062	Q = 9.50 (H - (-0.4))^2	0 < H <= 3.0
Mexico	5.933**	Q = 11.0 (H - (-0.50))^2	0 < H <= 3.0

Notes: RC equations by JICA Consultants
** - based on x-section of March 2000 (by PRFFWC)*
*** - based on temporary markers (TBM)*

Above table are still the latest information for PRBFFWC streamgaging sites. Rating curve equations remains the latest available for now. The RCs should be updated on a regular basis.

Water Level Percent Duration Curves of some stations

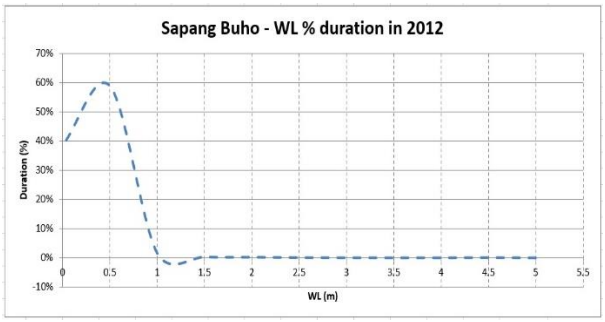


Figure AA-2. Sapang Buho WL percent duration curve (2022)

Figure AA-3. Zaragoza WL percent duration curve (2022)

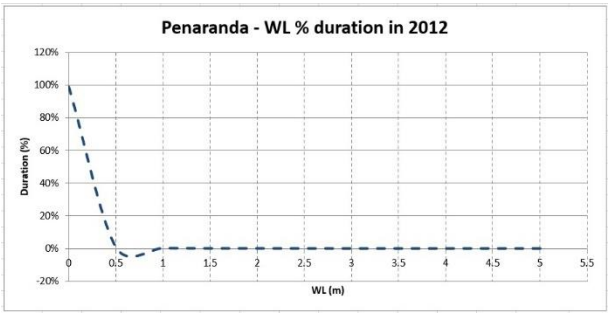


Figure AA-4. Peñaranda WL percent duration curve (2022)

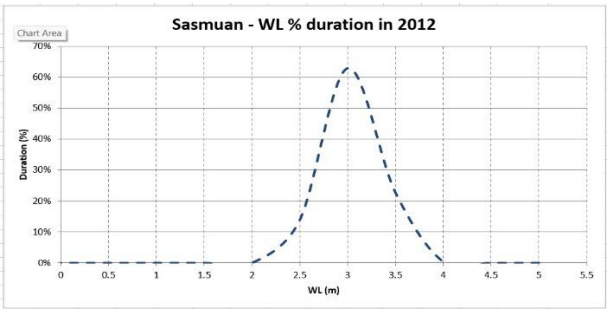


Figure AA-5. Sasmuan WL percent duration curve (2020)

Note: WL percent duration curves for the rest of the streamgaging stations for the year 2022 were not included due to considerable data breaks and gaps in their datasets.


http://prffwc.synthasite.com/
prffwcffb2009@gmail.com
(63) (045) 652 5175
(63) 0999 336 6416
PRFFWC