



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 Reg.3 Compd, Brgy. Maimpis, CSF, Pampanga 2000

(045) 455-1701

[prffwc@gmail.com](mailto:prffwc@gmail.com)

<http://prffwc.synthasite.com>



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

Yearbook 2012

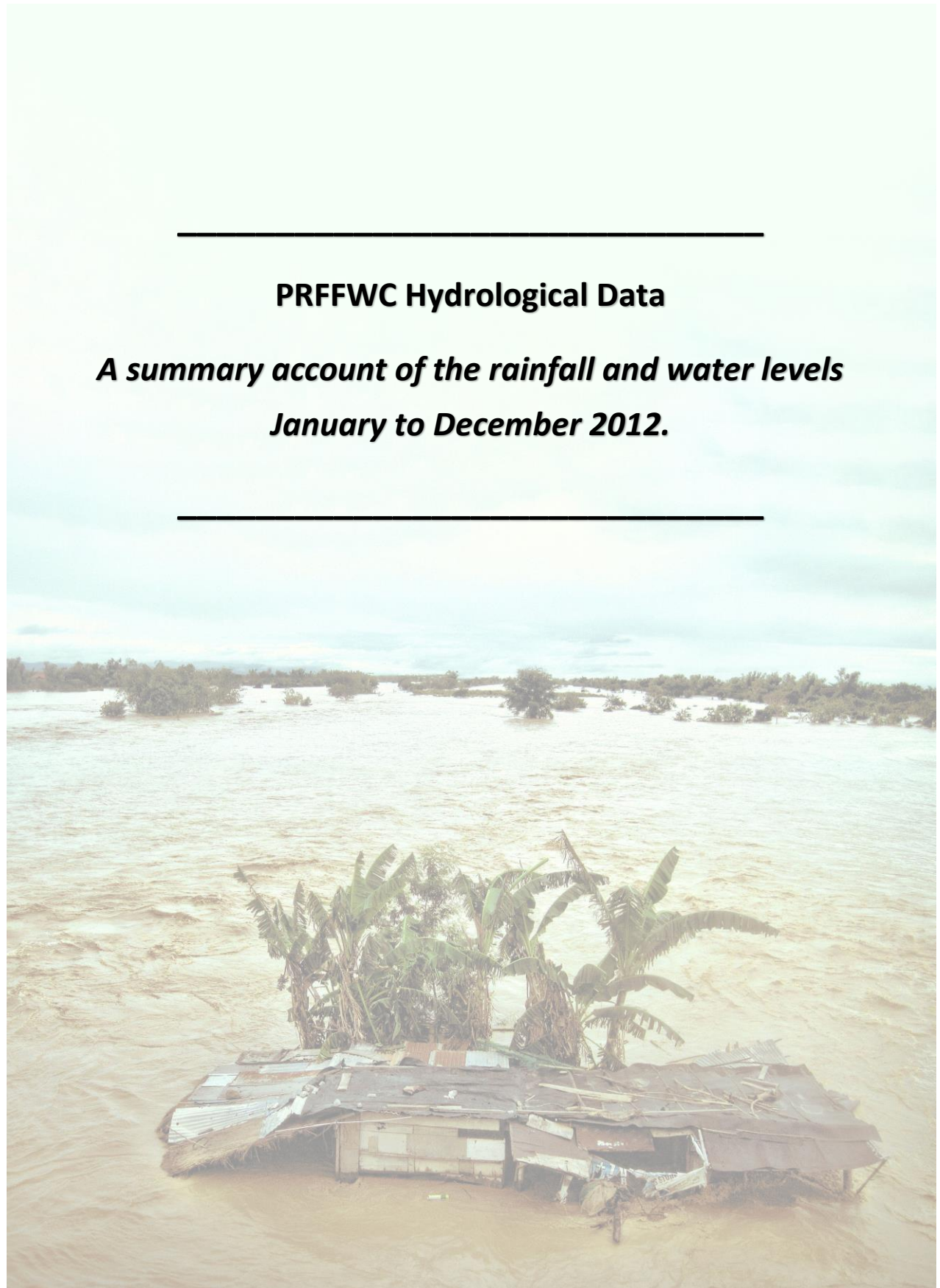
(April 2021)



Front Cover:

A View of the Pampanga River & the San Agustin Bridge with the majestic Mt. Arayat in the background. (October 24, 2011)

Photograph: H. Hernando Edited by: M. Joson



---

## **PRFFWC Hydrological Data**

***A summary account of the rainfall and water levels  
January to December 2012.***

---

### **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
- 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 – Pampanga River Basin Flood Forecasting & Warning Center
- Q - discharge
- Racc – accumulated rainfall
- RB – Right Bank
- RR – Rainfall
- SG or S.G. – Staff Gauge
- TBM – Temporary benchmark
- U/S - upstream
- WL – Water Level
- X-sect – cross-section

## Table of Contents:

	Page
<b>Yearbook Notes</b> .....	<b>1</b>
<b>Station Profile</b> .....	<b>2</b>
<b>Scope and Limitations</b> .....	<b>3</b>
<b>Data series issues of 2012</b> .....	<b>4</b>
<b>A. Rainfall Data Summary Presentation</b>	
Daily point rainfall of Muñoz Station .....	<b>6</b>
Daily point rainfall of Sapang Buho Station .....	<b>7</b>
Daily point rainfall of Gabaldon Station .....	<b>8</b>
Daily point rainfall of Zaragoza Station .....	<b>9</b>
Daily point rainfall of Mayapyap Station .....	<b>10</b>
Daily point rainfall of Peñaranda Station .....	<b>11</b>
Daily point rainfall of Calaan Station .....	<b>12</b>
Daily point rainfall of Palali Station .....	<b>13</b>
Daily point rainfall of San Isidro Station .....	<b>14</b>
Daily point rainfall of Arayat Station .....	<b>15</b>
Daily point rainfall of Candaba Station .....	<b>16</b>
Daily point rainfall of Sibul Springs Station .....	<b>17</b>
Daily point rainfall of Sasmuan Station .....	<b>18</b>
Daily point rainfall of Sulipan Station .....	<b>19</b>
Daily point rainfall of Mexico Station .....	<b>20</b>
Daily point rainfall of Porac Station .....	<b>21</b>
Daily point rainfall of San Rafael Station .....	<b>22</b>
Daily point rainfall of PRFFWC (CSFP) Station .....	<b>23</b>
Monthly Rainfall Summary for 2012 .....	<b>24</b>
Isohyets & Rain-Day distribution .....	<b>24</b>
Monthly rainfall distribution for each station .....	<b>25</b>
<b>B. Water Level Data Summary Presentation</b>	
Water Level daily average of Sapang Buho Station .....	<b>27</b>
Water Level daily average of Zaragoza Station .....	<b>28</b>
Water Level daily average of Mayapyap Station .....	<b>29</b>
Water Level daily average of Peñaranda Station .....	<b>30</b>
Water Level daily average of San Isidro Station .....	<b>31</b>
Water Level daily average of Arayat Station .....	<b>32</b>
Water Level daily average of Candaba Station .....	<b>33</b>
Water Level daily average of Sasmuan Station .....	<b>34</b>
Water Level daily average of Sulipan Station .....	<b>35</b>
Water Level daily average of Mexico Station .....	<b>36</b>
Monthly Maximum WL per station for the year 2012 .....	<b>37</b>
<b>C. Annex</b>	
Maximum rainfall per station for various sliding time period ...	<b>39</b>
Graph of max RR per station for various sliding time period ....	<b>40</b>
Present Flood Warning Assessment levels & WL notes .....	<b>41</b>
Water Level percent duration Curves .....	<b>42-45</b>

**Figures:**

Figure 1a	The Isohyet (RR distribution) for the year 2012 in the PRB .....	24
Figure 1b	Estimated RR days distribution (2012) in the PRB .....	24
Figure 2.0	Monthly RR distribution (hyetograph) for year 2012 for each monitoring stations of PRFFWC in the PRB .....	25
Figure AA-1	The sliding time period per station graph .....	40
Figure AA-2	Sapang Buho WL percent duration curve (2012) .....	42
Figure AA-3	Zaragoza WL percent duration curve (2012) .....	42
Figure AA-4	Arayat WL percent duration curve (2012) .....	43
Figure AA-5	Candaba WL percent duration curve (2012) .....	43
Figure AA-6	Sasmuan WL percent duration curve (2012) .....	44
Figure AA-7	Sulipan WL percent duration curve (2012) .....	44
Figure AA-8	Peñaranda WL percent duration curve (2012) .....	45
Figure AA-9	Mexico WL percent duration curve (2012) .....	45

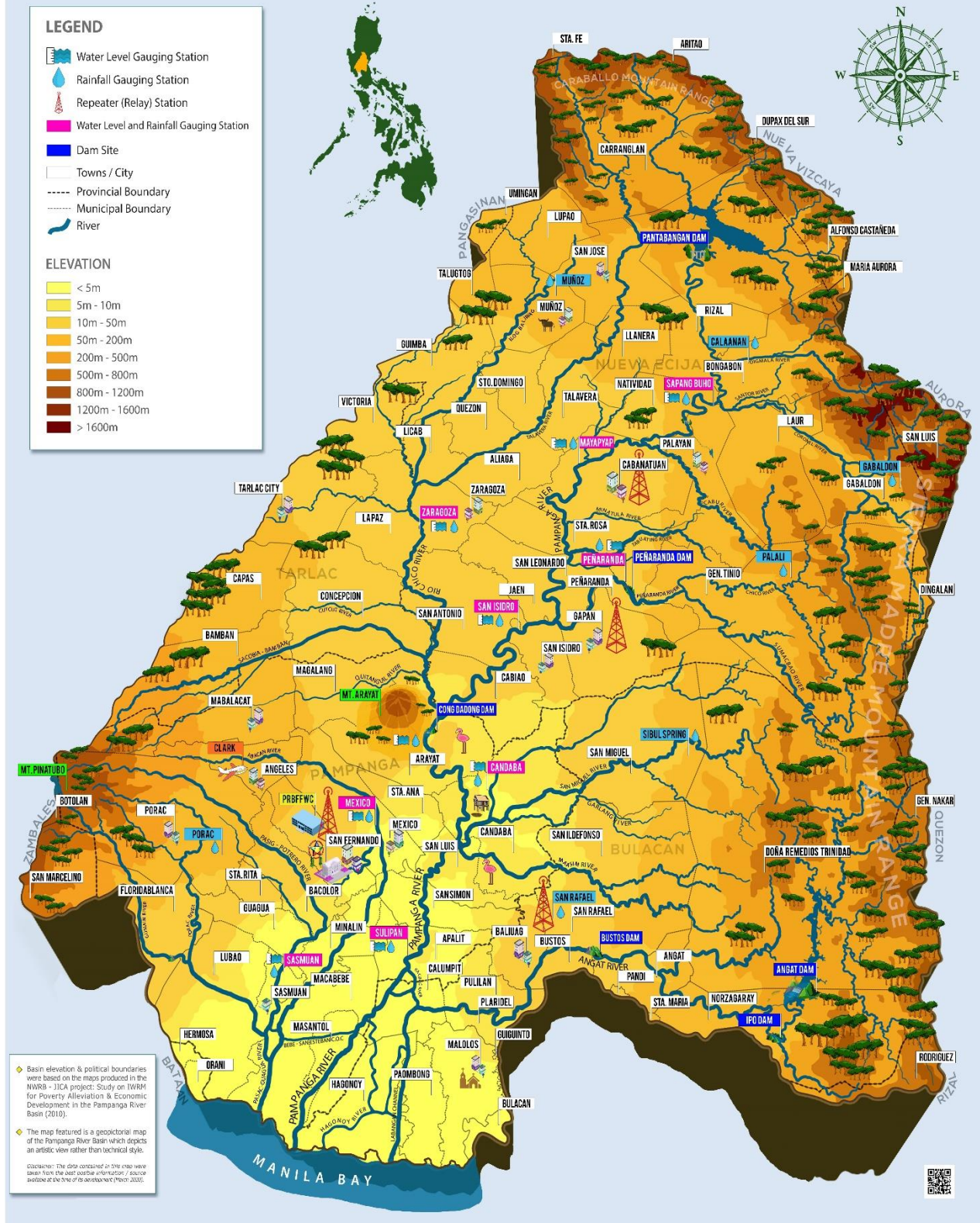
**List of Tables:**

Table 1.0	Monthly RR Summary for 2012 .....	24
Table 2.0	Monthly Maximum WL recorded per station for the year 2012 .....	37
Table A-1	Maximum RR for a given sliding time period per station for the year 2012 .....	39
Table A-2	PRFFWC existing Flood Warning Assessment Levels (SG in meters) .....	41
Table A-3	WL station notes .....	41



*The PRFFWC Telemetry Tower located in the City of San Fernando, Province of Pampanga.*

# PAMPANGA RIVER BASIN ELEVATION MAP



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



## Yearbook Notes



- This Annual Hydrological Data Summary Yearbook presents a summary of the rainfall and water level data observed and recorded by the telemetry system of the PRFFWC in year 2012.
- The supervisory terminal of the PRFFWC system is the main data series considered for database buildup. This is the immediate real-time data received at the center and the main data reference for operational flood forecasting and warning activities of the PRFFWC.
- The main source for complementing breaks / gaps in the supervisory terminal data series are the telemetry stations' data loggers that is if the data exist.
- In most instances, total rainfall shown in the supervisory is (always) equal to the total rainfall in the data logger. However, there were relatively few occasions that they do not agree with one another. Fortunately, differences were not that big, at most it is only 1 to 2 mm difference.
- No attempts were made to fill-in gaps and breaks in the data series when there are no data available in the loggers except only those with relatively short gap periods.
- Obvious and suspected data errors were directly deleted from the data series. However, these were done after doing some data consistency check, reference to field reports, and / or field station instrument validation.
- For further information and clarification on the general buildup of the PRFFWC data series please e-mail us: [prffwc@gmail.com](mailto:prffwc@gmail.com)

## Station Profile

Table of Rainfall and Water Level Stations of the PRFFWC

Station	Station Number	Station Type RR (rainfall) WL (Water Level)	Location	Coordinates (estimated)
	(DEC) 6301 XX			
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
Gabalton	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	@ RB-D/S of Gen. Luna Bridge, (Bgys. Mayapyap & Valdefuente) Cabanatuan City, Nueva Ecija	15°30'52"N, 120°57'20"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 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 (no hydrological data reporting)	Within the NIA-UPRIIS Compound, Cabanatuan City	15°28'33"N, 120°57'30"E
PRFFWC (CSFP)		Digital tipping-bucket / manually recorded	PRFFWC area compound besides DOST-3, DMGC, Bgy. Maimpis, CSFP	15°04'04"N, 120°39'22"E

## Scope and Limitations

1. This Data Yearbook presents the hydrological data summary of the 18 rainfall stations and 10 water level stations of the PRFFWC for the year 2012.
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, 2012, and will end at 0800H of 01 January 2013.
3. Accordingly, it follows a 24-hour daily total (or average for WL) which starts at (practically) 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 met day.
4. The shortest time period considered in this summary report is 1 hour.
5. Units used for some of the hydrological elements:
  - a. Rainfall – millimeters (mm)
  - b. Water Level (River Stage) – meters (m)
  - c. Cross-sectional area – square meter (m<sup>2</sup>)
  - d. River Discharge – cubic meters per second or cumecs (m<sup>3</sup>/sec)
  - e. Rainfall day – rain-days
6. The minimum rainfall amount for telemetry stations is 1 mm; and for the rainfall observations in PRFFWC in CSFP, the minimum is 0.25 mm;
7. Rain-day is considered as a day with at least 1 mm of rainfall for telemetry stations; and at least 0.25 mm for PRFFWC in CSFP station;
8. 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 for each month and other regular information that were extracted from the available data series of each station.
9. For the daily rainfall presentation table, yellow shaded cell indicates rainfall values between 1 to 60 mm for telemetry stations (0.25 to 60.0 for PRFFWC-CSFP station); pink shade cells from 61 to 180 mm (60.25 to 180.0 for PRFFWC-CSFP station); light-red shade cells 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 an 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 tables (the daily rainfall and in the average daily water level tables) a green shaded cell indicates the maximum value in their respective rows.

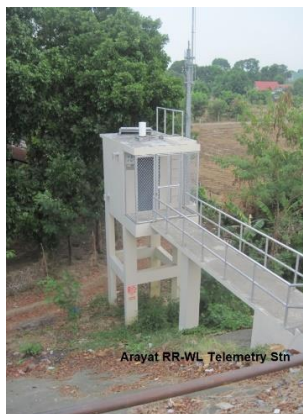
*Disclaimer: The dataset summary presented herein have been processed and validated through several steps using the best possible means available to the PRFFWC at the time of processing. However, still it is possible that results may contain inadvertent errors such as typographical in nature, errors resulting from possible misuse of excel formulae, and other similar factors. The summary information in this yearbook report may be revised as new analyses emerge.*

*Users noting any errors that they may have encountered in this report are requested to inform the PRFFWC. Furthermore, users may use the information contained herein at their own risk.*

## Data Series Issues of 2012

1. January: Mayapyap, Peñaranda, and San Isidro WL are all zero for the whole month; Arayat WL remains out of order (stolen cables).
2. February: Mayapyap, San Isidro, and Mexico WL are all zero for the whole month; Arayat WL restored 1500H, 08.
3. March: Mayapyap and San Isidro WL are all zero for the whole month.
4. April: Mayapyap, San Isidro, and Mexico WL are zero for the whole month.
5. May: Mayapyap, Peñaranda & San Isidro WL are all zero for the whole month.
6. June: Mayapyap and San Isidro WL are all zero for the whole month.
7. July: Dataset looks good for the whole month.
8. August: Peñaranda WL from 2300H, 10 to 1500H, 14 was not filled-in. Logger data shows zero reading and looks erroneous.
9. September: Dataset looks good for the whole month.
10. October: Arayat WL seems erratic but was left as is, no changes / adjustments were made.
11. November: Mayapyap and San Isidro WL are all zero for the whole month; Arayat WL gradual rise may be attributed to (possible) effects of Cong Dadong Dam.
12. December: Mayapyap and San Isidro WL are all zero for the whole month.

## A. RAINFALL Data Summary Presentation



## Daily Point Rainfall in millimeters (meteorological day)

2012

Station:

Muñoz

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	12	2	17	12	2	0	0
2	0	0	0	0	24	31	14	12	0	10	0	0
3	0	0	0	0	0	66	50	7	12	5	0	0
4	0	0	0	0	12	1	19	16	55	0	4	0
5	0	0	0	0	26	2	0	11	3	0	0	0
6	0	0	0	4	0	0	0	40	5	0	0	0
7	0	0	0	0	0	21	1	47	26	0	1	0
8	0	0	0	0	0	25	0	27	5	0	0	0
9	0	0	0	0	0	0	1	1	7	0	0	0
10	0	0	0	0	6	0	57	23	1	0	0	0
11	0	0	0	0	6	17	1	75	0	0	0	0
12	0	1	0	0	0	35	0	2	23	0	0	0
13	0	6	0	0	29	0	0	5	0	0	10	0
14	0	0	0	0	0	1	52	53	6	0	0	0
15	0	0	0	0	7	23	0	11	15	0	0	0
16	26	2	0	0	0	2	19	1	2	0	0	0
17	0	0	0	0	0	25	8	23	0	0	0	0
18	0	0	0	0	0	1	1	12	1	0	0	0
19	7	0	0	0	18	0	3	49	33	0	0	0
20	0	0	0	0	41	9	3	5	0	0	0	0
21	0	0	0	0	0	3	10	0	8	0	0	0
22	0	0	0	0	20	8	55	1	7	0	0	0
23	0	0	0	0	0	0	24	0	0	0	0	0
24	0	0	13	0	6	0	4	0	0	14	0	0
25	0	0	0	0	27	0	0	8	10	43	0	0
26	0	0	0	2	0	2	0	7	0	38	0	0
27	0	0	0	0	2	1	21	3	0	0	0	0
28	0	0	0	0	2	11	14	6	22	1	0	2
29	0	0	3	0	0	37	3	14	1	0	0	0
30	0		7	0	1	2	8	0	4	0	0	3
31	0		0		11		6	6		0		0

Monthly Total	33	9	23	6	238	335	376	482	258	113	15	5
Average	1.06	0.31	0.74	0.20	7.68	11.17	12.13	15.55	8.60	3.65	0.50	0.16
Max daily rain	26	6	13	4	41	66	57	75	55	43	10	3
Day of Max Daily	16	13	24	6	20	3	10	11	4	25	13	30
No. of Rain days	2	3	3	2	16	22	23	27	21	7	3	2
Max 1-hr rain	19	2	8	2	39	27	45	66	37	6	4	1
Day of max 1-hr	16	13	24	6	20	3	14	11	4	25	4	28

Total rain for the year

1893

Total rain days for the year

131

## Daily Point Rainfall in millimeters (meteorological day)

2012

Station:

Sapang\_Buho

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	2	0	44	25	14	8	15	0	0
2	0	0	0	3	0	57	5	4	86	27	0	0
3	0	0	0	0	30	39	44	11	0	7	0	0
4	0	0	0	0	15	27	12	66	44	0	0	0
5	0	0	0	0	0	0	3	5	3	0	0	0
6	0	0	0	0	0	0	6	20	0	0	0	0
7	0	0	0	0	2	0	0	44	9	0	0	0
8	0	0	0	0	0	10	0	17	4	0	0	0
9	0	0	0	0	0	0	0	1	6	0	0	0
10	1	0	0	0	24	3	16	23	6	0	0	0
11	0	0	0	0	0	7	3	16	16	17	0	0
12	0	3	0	0	0	35	0	2	0	8	14	0
13	0	7	0	0	7	0	25	63	0	0	13	0
14	0	0	1	0	0	14	14	33	12	0	0	0
15	1	0	0	0	0	19	0	4	46	0	0	0
16	1	2	0	0	0	0	20	6	1	0	0	0
17	0	0	0	0	0	14	2	1	20	0	0	0
18	0	0	0	0	15	10	0	30	1	0	0	0
19	0	0	0	0	0	0	6	9	1	0	0	0
20	0	1	0	0	0	1	27	4	0	0	0	0
21	0	0	0	9	0	3	10	1	0	0	0	0
22	0	0	0	0	1	46	53	1	33	0	0	1
23	0	0	0	0	0	0	14	13	6	0	0	0
24	0	0	5	0	0	0	5	15	0	15	0	0
25	0	0	0	0	0	8	26	50	51	37	0	0
26	0	0	0	0	21	3	0	9	11	47	0	0
27	0	0	0	0	0	46	14	20	0	0	0	4
28	0	0	0	0	3	17	30	32	54	3	0	2
29	0	0	30	0	14	19	0	6	0	0	0	1
30	0		7	0	3	0	3	0	11	0	0	0
31	0		0		5		20	23		0		0

Monthly Total	3	13	43	14	140	422	383	543	429	176	27	8
Average	0.10	0.45	1.39	0.47	4.52	14.07	12.35	17.52	14.30	5.68	0.90	0.26
Max daily rain	1	7	30	9	30	57	53	66	86	47	14	4
Day of Max Daily	10	13	29	21	3	2	22	4	2	26	12	27
No. of Rain days	3	4	4	3	12	20	23	30	21	9	2	4
Max 1-hr rain	1	2	11	9	24	33	23	50	50	17	10	1
Day of max 1-hr	10	13	30	22	3	27	13	25	25	2	13	22

Total rain for the year

2201

Total rain days for the year

135

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: Gabaldon											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	5	6	0	30	15	34	10	2	0	0
2	0	0	0	13	0	90	3	7	1	20	0	0
3	0	0	2	0	2	1	86	30	1	12	0	0
4	0	2	1	0	59	3	12	23	20	8	0	0
5	0	0	0	0	9	5	1	22	4	1	0	1
6	0	0	0	0	2	3	2	7	1	0	0	0
7	2	0	0	3	0	2	0	32	45	0	0	0
8	0	0	0	0	19	2	0	9	7	0	0	0
9	0	0	0	0	2	24	0	2	5	6	3	38
10	3	0	0	0	1	2	33	29	6	0	1	0
11	0	0	0	0	3	0	6	10	2	0	0	0
12	0	24	0	0	0	10	0	17	2	11	18	0
13	0	65	0	0	0	0	0	51	0	7	4	0
14	0	0	3	0	2	0	8	68	27	0	0	0
15	1	0	0	0	0	3	0	2	48	0	4	0
16	7	8	0	0	0	5	2	5	27	0	3	1
17	0	5	0	0	0	5	6	0	6	8	0	0
18	13	0	0	0	0	8	0	8	12	0	0	0
19	0	13	0	0	7	0	12	21	1	3	3	0
20	0	3	0	0	4	0	35	29	2	0	10	0
21	0	0	1	0	4	1	21	6	4	0	0	3
22	0	0	7	4	14	4	39	38	0	0	0	1
23	0	0	0	0	0	0	5	9	0	0	0	0
24	0	0	0	0	8	0	13	50	0	50	0	0
25	0	0	0	0	4	5	12	25	0	205	0	2
26	0	1	0	0	1	0	1	10	6	167	0	11
27	0	0	0	0	9	49	17	4	0	0	0	12
28	0	0	0	0	10	21	61	20	15	10	0	14
29	0	0	44	0	0	46	0	18	5	0	0	5
30	0		22	0	0	1	18	3	40	1	0	0
31	0		29		0		9	14		0		0

Monthly Total	26	121	114	26	160	320	417	603	297	511	46	88
Average	0.84	4.17	3.68	0.87	5.16	10.67	13.45	19.45	9.90	16.48	1.53	2.84
Max daily rain	13	65	44	13	59	90	86	68	48	205	18	38
Day of Max Daily	18	13	29	2	4	2	3	14	15	25	12	9
No. of Rain days	5	8	9	4	18	22	23	30	24	15	8	10
Max 1-hr rain	7	9	16	4	30	37	27	36	23	25	7	22
Day of max 1-hr	16	13	10	2	4	2	4	22	16	27	13	9

Total rain for the year	2729
Total rain days for the year	176



## Daily Point Rainfall in millimeters (meteorological day)

2012		Station: Zaragoza										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	9	0	0	0	0	3	20	11	42	5	0	0
2	0	1	0	1	18	12	7	5	8	34	0	0
3	0	0	0	0	14	4	36	4	0	14	0	0
4	0	0	0	0	1	7	3	3	28	4	0	0
5	0	0	0	0	16	15	0	32	4	0	0	0
6	0	0	0	0	0	0	1	51	7	1	0	0
7	0	0	0	0	0	0	1	102	1	0	3	0
8	0	0	0	0	0	2	0	39	1	0	0	0
9	0	0	0	0	0	11	3	9	1	0	0	0
10	0	0	0	0	0	12	44	17	1	0	0	0
11	0	0	0	0	0	0	15	5	0	0	0	0
12	0	1	0	0	0	0	1	0	2	0	1	0
13	0	5	0	0	0	0	1	17	0	3	4	0
14	0	0	0	0	1	0	84	27	37	0	0	0
15	0	0	0	0	0	8	0	5	91	0	0	0
16	3	2	0	0	0	0	37	1	4	10	0	0
17	0	1	0	0	0	17	7	0	0	0	0	0
18	0	0	0	0	0	2	7	2	0	0	0	0
19	0	0	0	0	1	4	3	12	1	0	0	0
20	0	0	0	0	1	1	10	0	1	0	0	0
21	0	0	0	1	0	9	27	14	22	0	0	0
22	0	0	0	0	14	0	67	7	1	0	0	0
23	0	0	0	0	0	0	19	30	0	0	0	0
24	0	0	13	0	0	0	2	0	2	9	0	0
25	0	0	0	0	2	3	14	2	0	95	0	0
26	0	0	0	6	0	1	17	4	0	14	0	0
27	0	0	0	0	0	117	21	4	0	1	0	0
28	0	0	0	0	34	10	1	4	6	0	0	0
29	0	0	8	0	0	31	0	21	0	0	0	1
30	0		8	0	0	2	48	38	3	0	0	0
31	1		0		39		7	1		0		0

Monthly Total	13	10	29	8	141	271	503	467	263	190	8	1
Average	0.42	0.34	0.94	0.27	4.55	9.03	16.23	15.06	8.77	6.13	0.27	0.03
Max daily rain	9	5	13	6	39	117	84	102	91	95	4	1
Day of Max Daily	1	13	24	26	31	27	14	7	15	25	13	29
No. of Rain days	3	5	3	3	11	20	27	27	20	11	3	1
Max 1-hr rain	9	2	7	6	32	64	54	31	19	16	3	1
Day of max 1-hr	1	13	24	26	28	27	14	30	21	26	7	29

Total rain for the year	1904
Total rain days for the year	134

## Daily Point Rainfall in millimeters (meteorological day)

2012

Station:

Mayapyap

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	2	0	87	10	11	8	6	0	0
2	0	0	0	0	0	51	0	4	0	29	0	0
3	0	0	0	0	0	17	39	16	0	8	0	0
4	0	0	0	0	33	4	3	8	33	2	0	0
5	0	0	0	0	2	4	0	13	3	0	0	0
6	0	0	0	0	0	0	2	23	0	0	0	0
7	0	0	0	0	0	0	2	66	3	4	0	0
8	0	0	0	0	2	3	0	34	1	0	0	0
9	0	0	0	0	1	5	1	6	3	3	0	0
10	1	0	0	0	15	9	13	16	0	0	0	0
11	0	0	0	0	0	0	1	47	11	0	0	0
12	0	3	0	0	0	27	1	0	12	5	6	0
13	0	6	0	0	0	0	7	10	0	2	9	0
14	0	0	1	0	0	0	19	45	28	0	0	0
15	8	0	0	0	4	26	0	7	46	0	0	0
16	2	2	0	0	2	2	4	0	3	0	0	0
17	0	0	0	0	0	17	1	0	1	0	0	0
18	0	0	0	0	2	23	0	47	0	0	0	0
19	7	0	0	0	19	0	1	15	0	0	0	0
20	0	0	0	0	0	2	22	5	0	0	1	0
21	1	0	0	0	2	37	15	0	7	0	0	0
22	0	0	0	0	2	20	46	24	24	0	0	0
23	0	0	1	0	0	0	17	2	4	0	0	0
24	0	0	5	0	1	0	2	57	0	13	0	0
25	0	0	1	0	0	3	10	12	47	85	0	0
26	0	0	0	0	0	0	6	6	1	31	0	0
27	0	0	0	0	0	55	11	17	1	0	0	4
28	0	0	0	0	0	12	22	22	16	1	0	2
29	0	2	13	0	0	23	0	17	0	0	0	1
30	0		9	0	1	5	4	1	0	0	0	0
31	21		0		14		3	4		0		0

Monthly Total	40	13	30	2	100	432	262	535	252	189	16	7
Average	1.29	0.45	0.97	0.07	3.23	14.40	8.45	17.26	8.40	6.10	0.53	0.23
Max daily rain	21	6	13	2	33	87	46	66	47	85	9	4
Day of Max Daily	31	13	29	1	4	1	22	7	25	25	13	27
No. of Rain days	6	4	6	1	14	21	25	27	19	12	3	3
Max 1-hr rain	12	2	5	2	28	68	14	25	41	26	6	2
Day of max 1-hr	31	29	30	2	4	1	14	24	25	26	13	28

Total rain for the year

1878

Total rain days for the year

141

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: Peñaranda											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	3	9	6	4	13	17	1	0	0
2	0	0	0	0	8	35	10	4	0	16	0	0
3	0	0	0	0	5	0	39	45	0	12	0	0
4	0	0	0	0	26	0	6	22	49	9	0	3
5	0	0	0	0	28	1	0	26	7	1	0	0
6	0	0	0	0	0	0	6	30	0	0	1	0
7	0	0	0	0	20	1	1	111	36	14	0	0
8	0	0	0	0	0	16	0	23	2	0	0	0
9	0	0	0	0	0	0	0	0	5	11	0	0
10	1	0	0	0	1	5	7	5	2	0	0	0
11	0	0	0	0	0	0	3	0	4	0	0	0
12	0	6	0	0	0	4	0	2	13	1	8	0
13	0	7	0	0	0	0	1	8	0	16	5	0
14	0	0	0	0	8	4	7	43	32	0	0	0
15	6	0	0	0	2	27	0	10	57	0	0	0
16	1	5	0	0	4	1	7	0	1	1	0	0
17	0	0	0	0	0	20	0	0	4	0	0	0
18	0	0	0	0	0	2	8	4	0	0	0	0
19	0	1	0	0	42	0	15	6	4	0	1	0
20	0	0	0	0	0	0	15	21	0	0	0	0
21	0	0	0	1	3	0	31	0	0	0	0	0
22	0	0	0	0	0	0	45	0	0	0	0	0
23	0	0	0	1	0	0	6	1	4	0	0	0
24	0	0	18	0	0	8	2	5	0	7	0	0
25	0	0	0	0	0	40	6	2	47	116	0	0
26	0	0	0	4	0	16	9	7	5	30	0	1
27	0	4	0	0	3	52	20	1	0	0	0	7
28	0	0	0	3	3	50	20	1	0	1	0	0
29	0	0	21	0	4	9	0	30	0	0	0	1
30	0		18	0	11	16	38	1	0	0	0	0
31	0		0		58		8	15		0		0

Monthly Total	8	23	57	12	235	313	314	436	289	236	15	12
Average	0.26	0.79	1.84	0.40	7.58	10.43	10.13	14.06	9.63	7.61	0.50	0.39
Max daily rain	6	7	21	4	58	52	45	111	57	116	8	7
Day of Max Daily	15	13	29	26	31	27	22	7	15	25	12	27
No. of Rain days	3	5	3	5	17	19	24	25	17	14	4	4
Max 1-hr rain	5	3	10	4	36	42	21	28	44	19	4	3
Day of max 1-hr	15	27	24	26	21	27	30	3	25	25	13	4

Total rain for the year	1950
Total rain days for the year	140

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: Calaanan											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	62	18	17	5	21	0	0
2	0	0	0	3	7	63	7	7	16	26	0	0
3	0	0	0	0	25	46	39	15	29	3	0	0
4	0	0	0	0	12	24	5	37	6	1	0	0
5	0	0	0	6	11	0	4	4	3	0	0	0
6	0	0	0	0	7	1	4	12	0	0	0	0
7	0	0	0	0	0	0	0	30	16	0	0	0
8	0	0	0	0	0	2	0	16	14	0	0	0
9	0	0	0	0	0	0	0	0	6	0	0	0
10	0	0	0	0	29	0	11	44	10	0	3	0
11	0	0	0	0	0	11	3	43	9	12	0	0
12	0	2	0	0	0	35	0	6	2	2	12	0
13	0	13	5	0	5	0	39	57	0	14	14	0
14	0	0	0	0	0	4	4	47	12	0	0	0
15	4	0	0	0	0	23	0	5	38	0	0	0
16	0	7	0	0	2	0	3	1	3	0	1	0
17	0	0	0	0	3	15	6	3	21	0	0	0
18	0	0	0	0	0	2	0	35	5	0	0	0
19	0	0	0	0	2	0	16	42	3	0	0	0
20	0	0	0	0	3	2	35	25	0	0	0	0
21	0	0	1	1	0	11	11	0	0	0	0	0
22	0	0	0	0	1	24	52	2	36	0	0	0
23	0	0	21	0	0	0	16	1	30	0	0	0
24	0	0	0	0	4	0	4	6	0	17	0	0
25	0	0	0	0	0	83	16	37	37	38	0	1
26	0	0	0	0	2	0	0	10	17	72	0	10
27	0	0	0	0	3	46	24	13	0	0	0	6
28	0	0	32	0	1	24	64	31	48	14	0	4
29	0	0	21	0	3	18	0	6	0	0	0	0
30	0		7	0	1	1	10	1	47	0	0	0
31	0		0		6		26	14		0		0

Monthly Total	4	22	87	10	127	497	417	567	413	220	30	21
Average	0.13	0.76	2.81	0.33	4.10	16.57	13.45	18.29	13.77	7.10	1.00	0.68
Max daily rain	4	13	32	6	29	83	64	57	48	72	14	10
Day of Max Daily	15	13	28	5	10	25	28	13	28	26	13	26
No. of Rain days	1	3	6	3	19	20	23	29	23	11	4	4
Max 1-hr rain	4	6	19	6	25	67	34	32	35	14	10	2
Day of max 1-hr	16	16	24	5	3	25	13	25	25	13	13	28

Total rain for the year	2415
Total rain days for the year	146

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: Palali											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	8	0	29	2	10	13	5	0	0
2	0	0	0	2	5	49	26	3	4	16	0	0
3	0	0	0	0	8	0	66	5	3	9	0	0
4	0	0	0	0	50	0	20	22	49	7	0	0
5	0	0	0	0	9	2	1	28	24	1	0	1
6	0	0	0	0	9	0	22	16	0	0	1	0
7	1	0	0	0	0	5	0	88	53	2	0	0
8	0	0	0	0	0	22	0	18	4	0	0	0
9	0	0	0	0	1	4	0	1	7	81	0	5
10	2	0	0	0	1	8	6	14	3	0	0	0
11	0	0	0	0	0	3	1	12	6	0	0	0
12	0	3	0	0	0	10	6	32	2	20	17	0
13	0	14	0	0	0	0	1	13	0	7	6	0
14	0	0	0	0	0	0	14	38	55	0	0	0
15	0	0	0	0	0	8	2	4	45	0	0	0
16	0	3	0	0	0	0	41	1	6	0	0	0
17	0	2	0	0	0	16	3	0	56	0	0	0
18	0	0	0	0	34	0	3	3	0	0	0	0
19	0	2	0	0	2	0	12	16	2	0	1	0
20	0	0	0	0	0	0	27	27	0	0	0	0
21	0	0	0	26	7	0	23	1	5	0	0	0
22	0	0	0	0	0	4	37	1	26	0	0	0
23	0	0	0	0	0	0	3	8	14	0	0	0
24	0	0	3	0	0	2	20	30	0	8	0	0
25	0	0	0	0	0	3	8	4	15	84	0	0
26	0	0	0	0	18	8	31	0	9	54	0	3
27	0	0	0	0	0	36	10	0	0	0	0	10
28	0	0	0	0	3	16	77	9	0	2	0	0
29	0	0	20	0	0	6	0	39	0	0	0	4
30	0		7	0	1	5	32	0	15	0	0	0
31	2		1		0		11	28		0		0

Monthly Total	5	24	31	36	148	236	505	471	416	296	25	23
Average	0.16	0.83	1.00	1.20	4.77	7.87	16.29	15.19	13.87	9.55	0.83	0.74
Max daily rain	2	14	20	26	50	49	77	88	56	84	17	10
Day of Max Daily	10	13	29	21	4	2	28	7	17	25	12	27
No. of Rain days	3	5	4	3	13	19	27	27	22	13	4	5
Max 1-hr rain	1	3	8	23	34	22	47	27	37	39	5	5
Day of max 1-hr	7	13	30	22	18	27	28	29	17	9	13	9

Total rain for the year	2216
Total rain days for the year	145

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: San Isidro											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	1	1	4	3	3	8	27	3	0	0
2	0	0	0	1	1	3	22	3	0	34	0	0
3	0	0	0	0	0	1	46	5	0	13	0	0
4	0	0	0	0	1	0	2	15	61	9	0	3
5	0	0	0	0	44	9	0	27	19	0	0	1
6	0	0	0	0	0	0	1	37	7	0	0	0
7	0	0	0	0	8	0	1	141	16	4	0	0
8	0	0	0	0	0	7	0	35	1	0	0	0
9	0	0	0	0	5	0	0	0	2	1	0	0
10	0	0	0	0	33	1	7	9	12	0	0	0
11	0	0	0	0	0	3	0	0	0	0	0	0
12	0	5	0	0	0	2	2	1	2	0	8	0
13	0	6	0	0	0	0	0	23	0	0	3	0
14	0	0	0	0	16	1	3	26	57	0	0	0
15	10	0	0	0	0	7	0	12	55	0	0	0
16	15	2	0	0	0	10	1	0	1	0	1	0
17	0	0	0	0	0	16	1	0	1	0	0	0
18	0	0	0	0	0	1	2	5	0	0	0	0
19	34	0	0	0	35	0	2	2	19	0	0	0
20	0	0	0	0	0	1	3	2	3	0	0	0
21	0	0	0	0	4	2	27	2	0	0	0	0
22	0	0	0	0	0	0	89	1	18	0	0	0
23	0	0	0	0	0	0	19	0	9	0	0	0
24	0	0	18	0	0	0	2	8	0	7	0	0
25	0	0	0	0	0	49	4	2	8	125	0	0
26	0	0	0	0	0	0	2	8	3	28	0	2
27	0	2	0	0	0	26	47	0	0	1	0	4
28	0	0	0	0	0	18	4	2	0	0	0	0
29	0	0	20	0	0	1	0	26	0	0	0	1
30	0		11	0	4	11	14	1	1	0	0	0
31	0		1		25		10	12		0		0

Monthly Total	59	15	51	2	180	172	314	413	322	225	12	11
Average	1.90	0.52	1.65	0.07	5.81	5.73	10.13	13.32	10.73	7.26	0.40	0.35
Max daily rain	34	6	20	1	44	49	89	141	61	125	8	4
Day of Max Daily	19	13	29	1	5	25	22	7	4	25	12	27
No. of Rain days	3	4	5	2	12	20	24	25	20	10	3	5
Max 1-hr rain	27	2	11	1	26	48	27	24	24	19	2	3
Day of max 1-hr	19	27	24	2	10	25	27	29	5	26	13	4

Total rain for the year	1776
Total rain days for the year	133

## Daily Point Rainfall in millimeters (meteorological day)

2012		Station: Arayat										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	2	4	8	45	6	0	0
2	0	0	0	0	0	6	20	11	2	29	0	0
3	0	0	0	0	0	0	52	1	0	19	0	0
4	0	0	0	0	0	4	5	19	53	1	0	0
5	0	0	0	0	15	11	2	57	4	0	0	0
6	0	0	0	0	36	0	22	75	1	0	0	0
7	0	0	0	0	8	1	0	158	8	13	0	0
8	0	0	0	0	0	0	0	56	4	0	0	0
9	0	0	0	0	14	0	0	11	7	0	0	0
10	0	0	0	0	47	0	37	11	20	4	0	0
11	0	0	0	0	3	1	0	1	8	0	0	0
12	0	3	0	0	0	5	4	0	10	0	14	0
13	0	5	0	0	4	2	3	21	0	0	9	0
14	0	0	0	0	31	0	5	31	89	0	0	0
15	0	0	0	0	2	19	1	19	68	0	0	0
16	8	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	31	1	0	23	0	0	0
18	0	0	0	0	0	4	0	1	0	0	0	0
19	0	1	0	0	8	0	0	1	15	5	1	0
20	0	0	0	0	0	0	6	1	2	0	3	0
21	0	0	0	3	3	2	36	5	16	0	0	0
22	0	0	0	0	10	0	75	5	14	0	0	0
23	0	0	16	0	0	0	15	15	37	0	0	0
24	0	0	59	0	2	4	20	8	0	19	0	0
25	0	0	0	0	0	4	1	1	4	91	0	0
26	0	0	0	0	0	0	0	5	0	29	0	4
27	0	0	0	0	0	0	45	0	0	0	0	1
28	0	0	0	0	5	12	0	10	2	0	0	0
29	0	0	7	2	15	10	14	2	1	0	0	0
30	0		5	0	1	4	8	0	3	0	0	0
31	0		0		9		8	2		0		0

Monthly Total	8	9	87	5	213	122	384	535	436	216	27	5
Average	0.26	0.31	2.81	0.17	6.87	4.07	12.39	17.26	14.53	6.97	0.90	0.16
Max daily rain	8	5	59	3	47	31	75	158	89	91	14	4
Day of Max Daily	16	13	24	21	10	17	22	7	14	25	12	26
No. of Rain days	1	3	4	2	17	17	22	26	23	10	4	2
Max 1-hr rain	4	3	32	3	43	12	37	20	24	19	9	2
Day of max 1-hr	16	13	24	22	10	15	22	7	5	26	13	27

Total rain for the year	2047
Total rain days for the year	131

## Daily Point Rainfall in millimeters (meteorological day)

2012		Station: Candaba										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	3	4	5	79	8	0	0
2	0	0	0	0	2	5	5	6	7	20	0	0
3	0	0	0	0	0	0	46	1	0	14	0	0
4	0	0	0	0	4	0	7	12	46	0	0	0
5	0	0	0	0	25	35	0	30	5	0	0	0
6	0	0	0	0	0	0	27	62	0	0	0	0
7	0	0	0	0	0	1	0	132	12	5	0	0
8	0	0	0	0	0	0	5	28	8	0	2	0
9	0	0	0	0	0	0	7	13	5	12	0	0
10	2	0	0	0	40	0	8	12	8	1	0	0
11	0	0	0	0	0	0	0	15	8	0	0	0
12	0	4	3	7	0	0	0	0	4	0	17	0
13	0	5	0	0	10	1	4	13	0	0	3	0
14	0	0	0	0	32	0	2	32	42	0	0	0
15	11	0	0	0	8	15	0	14	54	0	0	0
16	0	1	0	0	6	2	1	0	0	0	0	0
17	0	0	0	0	0	30	0	1	14	0	0	0
18	0	0	0	0	0	2	0	0	0	0	0	0
19	0	1	0	0	54	0	0	4	11	0	1	0
20	0	0	0	0	0	0	4	0	2	0	4	0
21	0	0	0	3	37	0	25	4	0	0	0	0
22	0	0	0	0	0	0	57	8	16	0	0	0
23	0	0	4	0	7	0	17	0	0	0	0	0
24	0	0	17	0	9	0	4	3	0	26	0	0
25	0	0	0	0	0	1	0	0	30	88	0	0
26	0	0	0	0	0	0	1	1	0	20	0	8
27	0	0	0	0	1	0	2	0	15	0	0	0
28	0	0	0	0	8	15	0	9	0	1	0	0
29	0	0	8	24	21	2	21	4	2	0	0	0
30	0		3	2	5	19	12	0	1	0	0	0
31	0		0		1		7	18		0		0

Monthly Total	13	11	35	36	270	131	266	427	369	195	27	8
Average	0.42	0.38	1.13	1.20	8.71	4.37	8.58	13.77	12.30	6.29	0.90	0.26
Max daily rain	11	5	17	24	54	35	57	132	79	88	17	8
Day of Max Daily	15	13	24	29	19	5	22	7	1	25	12	26
No. of Rain days	2	4	5	4	17	13	21	23	20	10	5	1
Max 1-hr rain	11	2	15	24	43	29	19	14	23	11	4	2
Day of max 1-hr	16	13	24	29	19	6	6	14	25	25	13	27

Total rain for the year	1788
Total rain days for the year	125



## Daily Point Rainfall in millimeters (meteorological day)

2012

Station:

Sibul\_Springs

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	1	4	34	5	7	8	39	8	0	0
2	0	0	0	0	0	5	4	12	0	16	0	0
3	3	0	0	0	3	1	41	2	0	18	0	1
4	1	0	0	0	9	8	9	5	69	5	0	2
5	0	0	0	0	64	5	0	15	19	0	0	1
6	0	0	0	0	0	0	8	57	0	0	1	0
7	0	0	1	0	5	1	0	121	9	3	0	0
8	2	0	0	0	0	0	0	43	6	0	1	0
9	0	0	0	0	8	0	0	3	5	6	0	0
10	6	1	0	0	13	0	10	51	5	34	0	0
11	0	0	0	0	0	0	1	5	0	0	0	0
12	0	4	0	0	0	0	19	3	3	0	16	0
13	0	9	0	0	0	1	0	7	0	0	2	0
14	0	0	2	0	35	6	31	32	77	0	0	0
15	0	0	0	0	12	33	9	4	51	0	2	0
16	0	1	0	0	4	5	66	1	2	0	0	0
17	0	2	0	0	0	25	2	0	20	0	0	0
18	0	0	0	0	44	5	26	1	1	0	0	0
19	0	1	0	0	45	0	3	22	0	0	2	0
20	0	1	0	0	0	0	18	0	62	0	1	0
21	0	1	0	25	30	3	29	3	6	0	0	0
22	0	0	1	0	0	0	65	0	4	0	0	0
23	0	0	0	2	9	0	14	0	7	0	0	0
24	0	0	26	0	1	3	8	0	0	25	0	0
25	0	0	0	0	0	38	1	0	27	134	0	0
26	0	0	0	0	0	1	1	0	0	24	0	11
27	0	0	0	0	0	9	33	4	1	0	0	3
28	0	0	0	0	1	20	22	23	0	1	0	0
29	1	0	21	0	1	6	16	14	21	0	0	0
30	0		18	0	0	19	33	0	3	0	0	0
31	5		0		2		13	46		0		0

Monthly Total	18	20	70	31	320	199	489	482	437	274	25	18
Average	0.58	0.69	2.26	1.03	10.32	6.63	15.77	15.55	14.57	8.84	0.83	0.58
Max daily rain	6	9	26	25	64	38	66	121	77	134	16	11
Day of Max Daily	10	13	24	21	5	25	16	7	14	25	12	26
No. of Rain days	6	8	7	3	18	20	26	23	21	11	7	5
Max 1-hr rain	3	4	12	18	51	19	56	37	26	25	5	5
Day of max 1-hr	10	13	24	22	5	25	16	31	20	26	13	27

Total rain for the year

2383

Total rain days for the year

155

## Daily Point Rainfall in millimeters (meteorological day)

2012		Station: Sasmuan										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	1	18	32	28	19	0	0
2	0	0	0	0	0	2	63	34	2	113	0	0
3	4	0	0	0	0	3	56	25	34	14	0	0
4	0	0	0	0	0	0	6	18	24	1	0	0
5	0	0	0	0	0	3	0	81	1	0	0	0
6	0	0	0	4	0	1	1	183	8	0	0	0
7	0	0	0	0	52	0	1	262	2	0	0	0
8	1	0	0	0	0	0	3	235	15	17	1	0
9	0	0	0	0	0	0	11	17	0	3	0	0
10	0	0	0	0	0	1	15	7	20	0	0	0
11	0	0	0	0	0	0	0	0	2	0	0	0
12	0	2	1	0	6	10	0	1	0	0	3	0
13	0	12	1	0	15	9	11	9	0	0	0	0
14	0	0	0	0	11	3	1	52	51	0	0	0
15	1	0	0	0	11	20	5	36	61	0	0	0
16	0	0	0	0	0	20	4	2	1	0	3	0
17	0	0	0	0	0	43	0	0	26	0	0	0
18	30	0	0	0	0	1	0	1	1	0	0	0
19	0	1	0	0	6	0	12	0	13	0	0	0
20	0	0	0	0	0	1	23	1	10	0	0	0
21	0	0	0	7	2	2	57	0	7	0	0	0
22	0	0	0	0	1	0	55	0	0	0	0	0
23	0	0	0	2	0	0	29	2	26	0	0	0
24	0	0	0	0	2	0	0	6	0	10	0	0
25	0	0	0	0	0	0	10	4	0	72	0	0
26	0	0	0	5	0	0	1	7	0	0	0	4
27	0	0	0	0	6	0	10	7	0	0	0	0
28	0	0	0	0	0	13	4	4	3	0	0	0
29	0	0	0	0	0	22	87	8	3	0	0	1
30	0		0	0	0	1	7	6	20	0	0	0
31	0		0		28		36	6		0		0

Monthly Total	36	15	2	18	140	156	526	1046	358	249	7	5
Average	1.16	0.52	0.06	0.60	4.52	5.20	16.97	33.74	11.93	8.03	0.23	0.16
Max daily rain	30	12	1	7	52	43	87	262	61	113	3	4
Day of Max Daily	18	13	12	21	7	17	29	7	15	2	12	26
No. of Rain days	4	3	2	4	11	18	25	26	22	8	3	2
Max 1-hr rain	21	6	1	4	32	10	37	44	34	33	2	1
Day of max 1-hr	18	13	13	6	8	13	2	8	3	3	16	27

Total rain for the year	2558
Total rain days for the year	128

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: Sulipan											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	1	19	7	25	13	0	0
2	0	0	0	0	0	1	19	36	15	49	0	0
3	0	0	0	0	0	2	68	4	0	10	0	0
4	0	0	0	2	0	0	15	12	32	2	0	1
5	0	0	0	32	21	14	1	37	8	0	0	0
6	0	0	0	0	0	1	2	146	0	0	0	0
7	0	0	0	0	5	0	0	192	0	0	0	0
8	4	0	0	0	0	0	11	145	5	3	2	0
9	0	0	0	0	0	0	0	16	1	0	0	0
10	1	0	0	0	2	0	39	1	71	0	0	0
11	0	0	0	0	39	0	0	0	25	0	0	0
12	0	8	5	0	16	9	0	0	10	0	6	0
13	0	5	0	0	6	17	0	3	0	0	1	0
14	0	2	0	0	10	1	2	47	63	0	0	0
15	0	0	0	0	2	7	0	38	65	0	0	0
16	0	0	0	0	4	7	0	2	0	0	0	0
17	0	2	0	0	0	40	0	0	10	0	0	0
18	0	0	0	2	0	0	0	0	1	0	0	0
19	0	4	5	0	7	0	23	0	1	0	0	0
20	0	0	0	0	0	1	12	1	1	0	0	0
21	0	1	5	8	0	0	53	1	0	0	0	0
22	0	3	0	0	0	0	72	0	1	0	0	0
23	0	0	0	18	10	0	18	0	12	0	0	0
24	0	0	3	0	0	0	4	3	0	16	0	0
25	0	0	0	0	0	0	2	1	7	74	0	0
26	0	0	0	15	0	0	0	0	0	1	0	9
27	0	0	0	0	11	0	3	2	1	0	0	0
28	0	0	0	0	15	25	0	5	1	0	0	0
29	0	0	0	0	2	6	57	5	9	0	0	1
30	0		0	0	1	5	5	0	10	0	0	0
31	0		0		12		26	13		0		0

Monthly Total	5	25	18	77	163	137	451	717	374	168	9	11
Average	0.16	0.86	0.58	2.57	5.26	4.57	14.55	23.13	12.47	5.42	0.30	0.35
Max daily rain	4	8	5	32	39	40	72	192	71	74	6	9
Day of Max Daily	8	12	12	5	11	17	22	7	10	25	12	26
No. of Rain days	2	7	4	6	16	15	20	22	22	8	3	3
Max 1-hr rain	1	3	5	29	23	11	21	30	27	11	3	3
Day of max 1-hr	8	12	19	6	11	26	22	8	10	2	13	27

Total rain for the year	2155
Total rain days for the year	128

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: Mexico											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	1	13	14	55	11	0	0
2	0	0	0	0	0	1	8	10	11	37	0	0
3	0	0	0	0	0	0	55	3	1	15	0	0
4	0	0	0	0	0	0	4	18	30	0	0	0
5	0	0	0	0	9	5	8	52	5	0	0	0
6	0	0	0	48	7	0	10	97	0	0	0	0
7	0	0	7	0	0	0	0	176	53	1	0	0
8	1	0	0	0	0	0	1	44	13	0	1	0
9	0	0	0	0	0	0	5	56	0	0	1	0
10	0	0	0	0	1	0	43	2	13	0	0	0
11	0	0	0	0	3	0	0	2	4	0	0	0
12	0	6	6	0	0	0	15	0	0	0	6	0
13	0	5	1	0	12	6	7	2	0	0	7	0
14	0	0	0	0	55	0	0	48	89	5	0	0
15	0	0	0	0	9	17	0	16	72	0	0	0
16	0	2	0	0	3	1	0	1	0	0	0	0
17	0	0	0	0	0	56	1	0	13	0	0	0
18	0	0	0	0	0	1	1	0	0	0	0	0
19	0	3	0	0	10	0	0	2	60	0	1	0
20	0	0	0	0	0	1	8	5	13	0	18	0
21	0	2	0	2	11	7	38	0	0	0	0	0
22	0	0	0	0	13	0	70	0	2	0	0	0
23	0	0	0	0	8	0	19	1	34	0	0	0
24	0	0	41	0	3	0	6	2	0	15	0	0
25	0	0	0	0	0	1	0	2	0	76	0	0
26	0	0	0	0	0	0	19	1	0	35	0	6
27	0	0	0	0	0	0	5	0	19	0	0	0
28	0	0	0	0	0	11	0	7	0	2	0	0
29	0	0	5	0	11	10	32	1	0	0	0	0
30	0		1	0	0	14	6	5	3	0	0	0
31	0		0		0		17	2		0		0

Monthly Total	1	18	61	50	155	132	391	569	490	197	34	6
Average	0.03	0.62	1.97	1.67	5.00	4.40	12.61	18.35	16.33	6.35	1.13	0.19
Max daily rain	1	6	41	48	55	56	70	176	89	76	18	6
Day of Max Daily	8	12	24	6	14	17	22	7	14	25	20	26
No. of Rain days	1	5	6	2	14	14	23	25	18	9	6	1
Max 1-hr rain	1	3	33	33	26	20	33	32	34	21	15	2
Day of max 1-hr	8	13	24	6	14	18	10	7	23	26	20	27

Total rain for the year	2104
Total rain days for the year	124

## Daily Point Rainfall in millimeters (meteorological day)

2012		Station: Porac										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0	0	0	0	20	15	5	23	8	0	0
2	0	0	0	0	0	8	4	43	2	88	0	0
3	0	0	0	0	0	0	49	2	0	10	0	0
4	0	0	0	0	51	0	5	36	16	3	0	0
5	0	0	0	0	3	4	1	45	6	0	0	0
6	0	0	0	1	0	1	1	156	8	0	0	0
7	0	0	5	0	22	1	0	159	5	1	0	0
8	0	0	0	0	0	3	5	43	2	0	0	0
9	0	0	0	0	0	0	0	32	0	1	0	0
10	0	0	0	0	1	0	6	1	68	0	0	0
11	0	0	0	0	13	0	0	0	0	0	0	0
12	0	2	2	0	5	0	0	2	0	0	0	0
13	0	7	0	0	4	2	1	14	0	1	0	0
14	0	0	0	0	21	14	0	84	49	0	0	0
15	6	0	0	0	0	23	1	26	101	0	1	0
16	0	0	0	0	0	7	0	3	0	0	0	0
17	0	0	0	0	0	63	4	0	21	0	0	0
18	0	0	0	0	0	22	7	57	0	0	0	0
19	0	0	0	0	5	6	48	2	24	0	1	0
20	0	0	0	0	0	16	20	0	8	0	3	0
21	0	0	0	0	0	0	40	0	0	0	0	0
22	0	0	0	3	0	0	46	0	0	0	0	0
23	0	0	6	16	6	0	4	0	7	0	0	0
24	0	0	8	0	0	0	0	3	0	7	0	0
25	0	0	0	0	0	4	0	2	0	58	0	0
26	0	0	0	2	5	0	0	26	0	0	0	2
27	0	0	0	0	0	0	0	2	0	0	0	0
28	0	0	0	0	0	51	0	10	0	0	0	0
29	0	0	0	0	2	23	0	3	2	0	0	0
30	1		1	0	0	10	0	10	3	0	0	0
31	43		0		15		30	0		0		0

Monthly Total	50	9	22	22	153	278	287	766	345	177	5	2
Average	1.61	0.31	0.71	0.73	4.94	9.27	9.26	24.71	11.50	5.71	0.17	0.06
Max daily rain	43	7	8	16	51	63	49	159	101	88	3	2
Day of Max Daily	31	13	24	23	4	17	3	7	15	2	20	26
No. of Rain days	3	2	5	4	13	18	18	24	16	9	3	1
Max 1-hr rain	23	3	7	10	36	25	40	52	31	25	2	1
Day of max 1-hr	31	13	24	23	4	29	19	18	10	3	20	27

Total rain for the year	2116
Total rain days for the year	116

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: San_Rafael											
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	1	0	0	35	2	20	9	77	12	0	0
2	0	0	0	0	0	0	7	24	5	43	0	2
3	0	0	0	0	0	1	56	15	0	22	0	0
4	0	0	0	0	0	0	11	23	48	1	0	0
5	0	0	0	6	12	43	2	23	7	0	0	0
6	0	0	0	0	0	3	5	118	2	0	0	0
7	0	0	8	0	4	3	3	174	6	38	0	0
8	9	0	0	0	0	0	0	109	10	1	0	0
9	0	0	0	0	1	0	30	24	1	0	0	0
10	2	0	0	0	3	0	20	2	2	1	0	0
11	0	0	0	0	31	3	2	0	4	0	0	0
12	0	12	5	19	12	1	0	0	0	0	11	0
13	0	7	1	0	31	12	1	5	0	0	1	0
14	0	0	1	0	6	2	30	42	51	0	0	0
15	0	0	0	0	3	28	0	24	46	0	0	0
16	2	2	0	0	0	11	0	0	0	0	2	0
17	0	0	0	0	0	45	0	0	27	0	0	0
18	0	0	0	0	0	0	0	0	1	0	0	0
19	0	4	0	0	44	0	0	2	0	0	0	0
20	0	1	0	0	0	0	17	0	0	0	1	0
21	0	0	0	5	24	11	79	0	0	0	0	0
22	0	20	1	9	2	0	120	0	1	0	0	0
23	0	0	7	2	8	0	10	0	3	0	0	0
24	0	0	106	0	9	0	0	10	0	15	0	0
25	0	0	0	0	1	2	1	2	1	90	0	0
26	0	0	0	0	0	0	24	6	0	21	0	14
27	0	0	0	0	29	15	51	6	6	0	0	0
28	0	0	0	0	10	27	0	18	0	0	0	0
29	0	0	8	0	8	1	53	6	7	0	0	1
30	0		1	1	0	15	5	0	8	0	0	0
31	0		8		1		20	56		0		0

Monthly Total	13	47	146	42	274	225	567	698	313	244	15	17
Average	0.42	1.62	4.71	1.40	8.84	7.50	18.29	22.52	10.43	7.87	0.50	0.55
Max daily rain	9	20	106	19	44	45	120	174	77	90	11	14
Day of Max Daily	8	22	24	12	19	17	22	7	1	25	12	26
No. of Rain days	3	7	10	6	20	18	22	21	20	10	4	3
Max 1-hr rain	3	15	78	13	31	22	35	34	39	15	3	3
Day of max 1-hr	8	22	24	12	13	6	22	8	1	8	13	27

Total rain for the year	2601
Total rain days for the year	144

## Daily Point Rainfall in millimeters (meteorological day)

2012	Station: PRFFWC_(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	0.8	21.1	10.9	9.4	8.6	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	2.0	21.1	22.6	1.3	103.6	0.0	0.0
3	1.3	0.0	0.0	0.0	0.0	0.0	71.4	3.6	3.0	11.4	0.0	0.0
4	0.0	0.0	0.0	0.0	3.8	0.0	3.6	17.3	22.6	0.5	0.0	0.0
5	0.0	0.0	0.0	0.0	1.0	5.6	3.0	62.2	1.5	0.0	0.0	0.0
6	0.0	0.0	0.0	19.8	9.4	0.0	2.5	139.2	0.0	0.0	0.0	0.0
7	0.0	0.0	4.1	0.0	11.4	0.5	0.0	163.3	13.7	2.0	0.0	0.0
8	0.8	0.0	0.0	0.0	0.0	11.7	0.5	36.6	19.6	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	4.8	61.2	0.0	0.0	0.0	0.0
10	0.8	0.0	0.0	0.0	0.0	0.0	15.5	6.6	23.1	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	1.8	0.0	0.0	0.0
12	0.0	5.6	7.4	0.0	1.0	6.4	0.0	1.3	0.0	0.0	3.8	0.0
13	0.0	7.6	0.0	0.0	1.8	10.2	38.4	10.2	0.0	0.0	6.6	0.0
14	0.0	0.0	0.0	0.0	22.6	8.1	1.8	46.7	40.4	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	9.7	11.2	0.3	16.5	90.7	0.0	0.0	0.0
16	1.5	1.8	0.0	0.0	0.0	9.1	0.0	4.3	0.0	0.0	1.3	0.0
17	0.0	0.0	0.0	0.0	0.0	51.1	1.3	0.0	6.6	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	3.3	3.8	1.0	0.0	0.0	0.3	0.0
19	0.0	2.5	0.0	0.0	27.2	0.0	2.5	0.8	40.1	1.5	2.3	0.0
20	0.0	0.0	0.0	0.0	0.0	3.3	16.3	0.0	0.0	0.0	15.0	0.0
21	0.0	0.0	0.0	0.0	16.0	9.9	35.6	0.5	25.4	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	1.8	0.0	53.6	0.3	0.3	0.0	0.0	0.0
23	0.0	0.0	0.0	8.1	0.0	0.0	18.8	0.3	27.2	0.0	0.0	0.0
24	0.0	0.0	22.4	0.0	0.5	0.0	15.2	5.1	0.0	16.3	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	1.5	3.3	2.5	0.0	73.2	0.0	0.0
26	0.0	0.0	0.0	24.1	0.0	0.0	23.6	7.4	0.0	4.8	0.0	5.6
27	0.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	18.5	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	21.6	2.3	3.3	0.0	1.3	0.0	0.0
29	0.0	0.0	4.8	0.0	0.0	14.0	43.4	7.1	0.0	0.0	0.0	2.5
30	0.0		1.5	0.0	0.0	17.0	12.4	0.3	6.1	0.0	0.0	0.0
31	0.0		0.0		8.4		24.9	0.0		0.0		0.0

Monthly Total	4.3	17.5	40.1	52.1	120.1	187.2	454.9	630.9	351.3	223.3	29.2	8.1
Average	0.14	0.60	1.29	1.74	3.88	6.24	14.67	20.35	11.71	7.20	0.97	0.26
Max daily rain	1.5	7.6	22.4	24.1	27.2	51.1	71.4	163.3	90.7	103.6	15.0	5.6
Day of Max Daily	16	13		26	19	17	3	7	15	2	20	26
No. of Rain days	4	4	5	3	14	18	27	26	18	10	6	2
Max 1-hr rain												
Day of max 1-hr												

Total rain for the year	2119.1
Total rain days for the year	137

Table 1.0

Monthly Rainfall Summary for 2012															
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	33	9	23	6	238	335	376	482	258	113	15	5	1893	131	75
Sapang Buho	3	13	43	14	140	422	383	543	429	176	27	8	2201	135	86
Gabalдон	26	121	114	26	160	320	417	603	297	511	46	88	2729	176	205
Zaragoza	13	10	29	8	141	271	503	467	263	190	8	1	1904	134	117
Mayapyap	40	13	30	2	100	432	262	535	252	189	16	7	1878	141	87
Peñaranda	8	23	57	12	235	313	314	436	289	236	15	12	1950	140	116
Calaanan	4	22	87	10	127	497	417	567	413	220	30	21	2415	146	83
Palali	5	24	31	36	148	236	505	471	416	296	25	23	2216	145	88
San Isidro	59	15	51	2	180	172	314	413	322	225	12	11	1776	133	141
Arayat	8	9	87	5	213	122	384	535	436	216	27	5	2047	131	158
Candaba	13	11	35	36	270	131	266	427	369	195	27	8	1788	125	132
Sibul Spring	18	20	70	31	320	199	489	482	437	274	25	18	2383	155	134
Sasmuan	36	15	2	18	140	156	526	1046	358	249	7	5	2558	128	262
Sulipan	5	25	18	77	163	137	451	717	374	168	9	11	2155	128	192
Mexico	1	18	61	50	155	132	391	569	490	197	34	6	2104	124	176
Porac	50	9	22	22	153	278	287	766	345	177	5	2	2116	116	159
San Rafael	13	47	146	42	274	225	567	698	313	244	15	17	2601	144	174
PRFFWC	4.3	17.5	40.1	52.1	120.1	187.2	454.9	630.9	351.3	223.3	29.2	8.1	2119.1	137	163.3

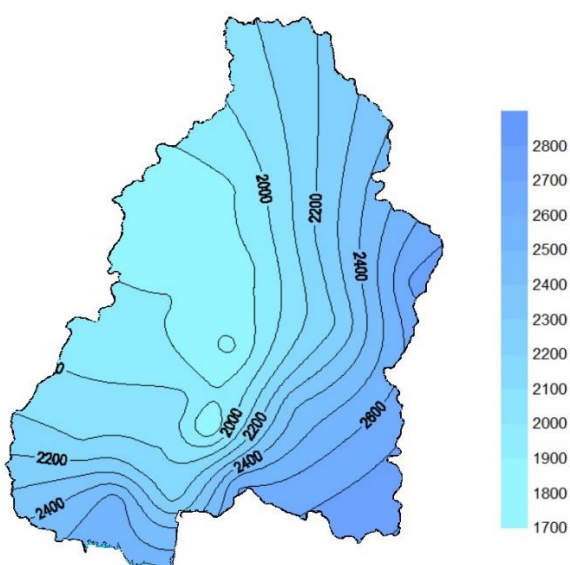


Figure 1a. The Isohyet rainfall distribution for the year 2012 in the Pampanga River Basin

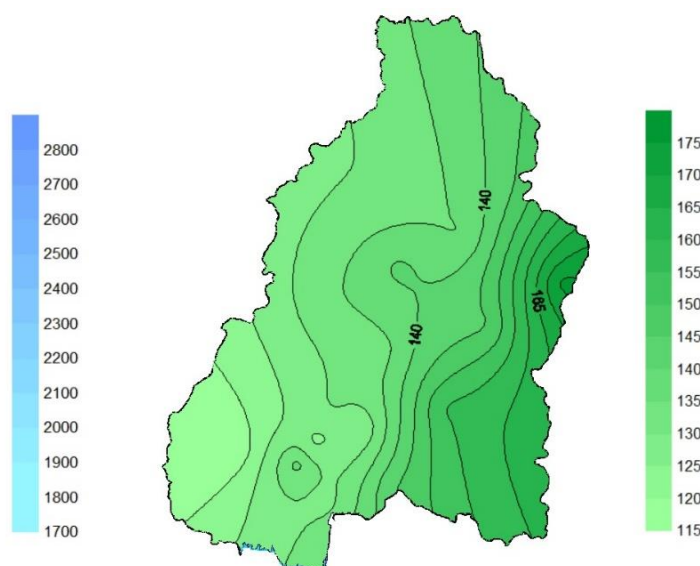


Figure 1b. Estimated rainfall days distribution (2012) in the Pampanga River Basin



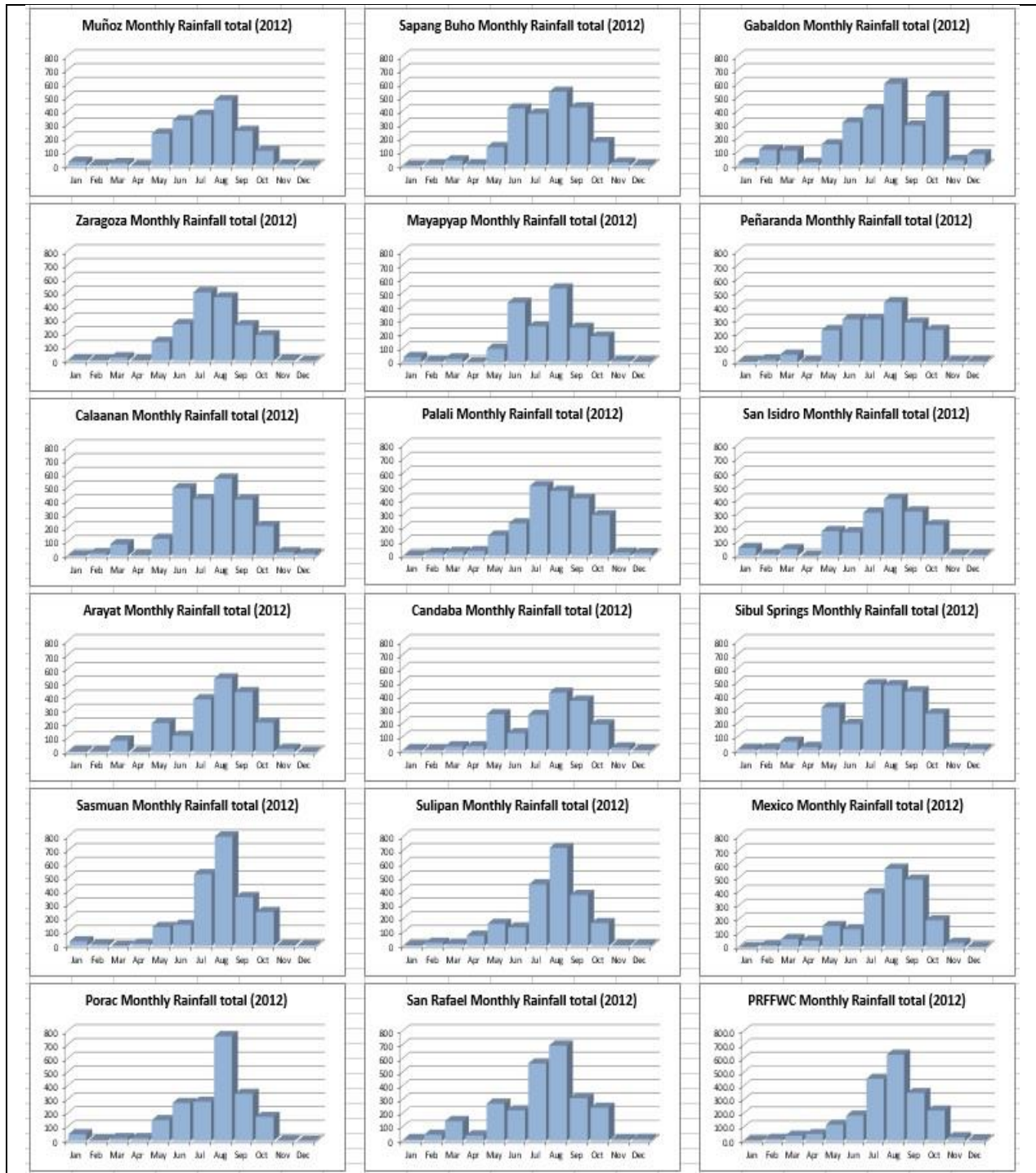


Figure 2. Monthly Rainfall distribution (hyetograph) of all operational RR monitoring stations of PRFFWC within the PRB for the year 2012.

## B. WATER LEVEL Data Summary Presentation



**Water Level in meters (Daily Average)**

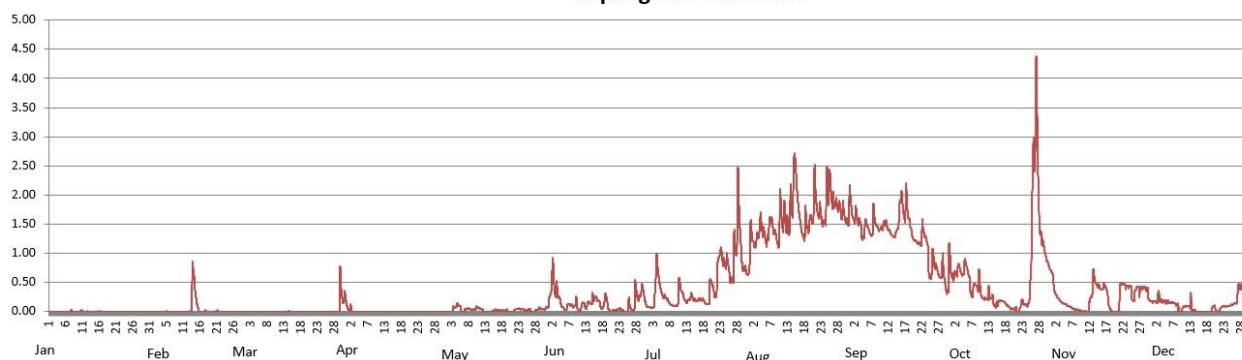
**2012**

Station: **Sapang\_Buho**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.09	0.00	0.16	0.08	1.12	1.66	0.67	0.43	0.17
2	0.00	0.00	0.00	0.04	0.00	0.60	0.06	1.17	1.65	0.64	0.25	0.17
3	0.00	0.00	0.00	0.00	0.05	0.38	0.27	1.24	1.53	0.74	0.17	0.24
4	0.00	0.00	0.00	0.00	0.09	0.26	0.73	1.48	1.31	0.65	0.14	0.18
5	0.00	0.00	0.00	0.00	0.09	0.18	0.55	1.42	1.40	0.73	0.12	0.17
6	0.00	0.00	0.00	0.00	0.00	0.04	0.25	1.21	1.38	0.65	0.07	0.16
7	0.01	0.00	0.00	0.00	0.04	0.12	0.20	1.53	1.46	0.29	0.04	0.15
8	0.00	0.00	0.00	0.00	0.04	0.10	0.12	1.41	1.52	0.46	0.03	0.12
9	0.00	0.00	0.00	0.00	0.03	0.12	0.10	1.26	1.41	0.46	0.01	0.01
10	0.00	0.00	0.00	0.00	0.06	0.03	0.22	1.60	1.46	0.30	0.01	0.06
11	0.00	0.00	0.00	0.00	0.06	0.10	0.41	1.60	1.51	0.22	0.00	0.09
12	0.00	0.00	0.00	0.00	0.02	0.08	0.23	1.49	1.39	0.26	0.22	0.11
13	0.00	0.40	0.00	0.00	0.00	0.15	0.18	1.67	1.31	0.23	0.54	0.02
14	0.00	0.34	0.00	0.00	0.00	0.17	0.25	2.15	1.33	0.10	0.45	0.00
15	0.00	0.04	0.00	0.00	0.01	0.23	0.21	2.25	1.63	0.15	0.40	0.00
16	0.00	0.00	0.00	0.00	0.02	0.18	0.19	1.60	1.86	0.18	0.43	0.00
17	0.00	0.00	0.00	0.00	0.01	0.06	0.20	1.29	1.80	0.15	0.32	0.00
18	0.00	0.00	0.00	0.00	0.01	0.21	0.18	1.53	1.60	0.09	0.05	0.00
19	0.00	0.00	0.00	0.00	0.01	0.10	0.13	1.54	1.32	0.05	0.00	0.06
20	0.00	0.00	0.00	0.00	0.00	0.00	0.44	1.72	1.21	0.05	0.00	0.03
21	0.00	0.00	0.00	0.00	0.00	0.02	0.34	1.95	1.16	0.00	0.34	0.02
22	0.00	0.00	0.00	0.00	0.04	0.03	0.60	1.70	1.32	0.14	0.47	0.08
23	0.00	0.00	0.00	0.00	0.05	0.02	1.01	1.54	1.28	0.13	0.43	0.09
24	0.00	0.00	0.00	0.00	0.04	0.00	0.85	1.89	0.85	0.12	0.41	0.10
25	0.00	0.00	0.00	0.00	0.02	0.08	0.85	2.14	0.81	0.99	0.21	0.12
26	0.00	0.00	0.00	0.00	0.03	0.05	0.57	1.88	0.81	2.78	0.41	0.15
27	0.00	0.00	0.00	0.00	0.00	0.22	0.90	1.85	0.64	2.99	0.38	0.40
28	0.00	0.00	0.00	0.00	0.01	0.25	1.56	1.79	0.72	1.31	0.41	0.42
29	0.00	0.00	0.00	0.00	0.04	0.36	1.32	1.71	0.46	1.09	0.38	0.27
30	0.00		0.40	0.00	0.04	0.24	0.74	1.57	0.63	0.86	0.19	0.17
31	0.00		0.24		0.05		0.66	1.80		0.70		0.05

Max WL observed	0.03	0.86	0.77	0.20	0.14	0.92	2.47	2.72	2.21	4.38	0.73	0.49
Day of Max WL	8	14	30	1	5	3	29	15	18	27	13	28

**Sapang Buho WL 2012**



**Water Level in meters (Daily Average)**

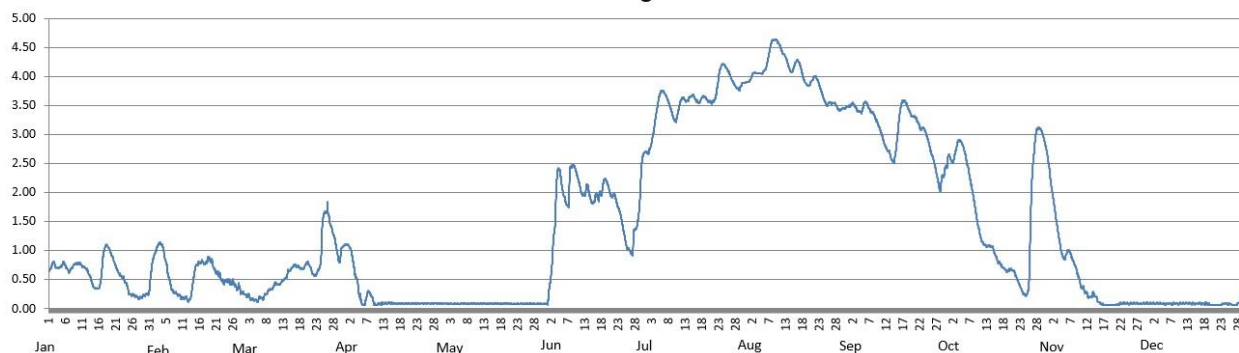
**2012**

Station: **Zaragoza**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.69	0.78	0.25	1.11	0.09	0.15	2.69	3.91	3.51	2.62	2.06	0.09
2	0.79	0.99	0.23	1.05	0.09	0.61	2.75	4.01	3.50	2.55	1.66	0.09
3	0.71	1.11	0.17	0.78	0.08	1.37	3.01	4.06	3.42	2.78	1.28	0.09
4	0.72	1.08	0.15	0.51	0.08	2.31	3.38	4.05	3.39	2.89	0.96	0.09
5	0.75	0.96	0.15	0.36	0.08	2.28	3.53	4.05	3.46	2.84	0.93	0.08
6	0.70	0.54	0.19	0.07	0.09	1.93	3.74	4.13	3.51	2.58	1.00	0.09
7	0.65	0.33	0.22	0.19	0.09	1.79	3.65	4.34	3.40	2.29	0.88	0.09
8	0.74	0.28	0.29	0.27	0.09	2.39	3.50	4.58	3.34	1.99	0.74	0.09
9	0.78	0.23	0.33	0.14	0.09	2.45	3.31	4.63	3.21	1.63	0.56	0.08
10	0.77	0.18	0.40	0.07	0.09	2.27	3.27	4.57	3.06	1.32	0.38	0.09
11	0.73	0.19	0.43	0.08	0.09	2.05	3.50	4.45	2.88	1.14	0.31	0.09
12	0.68	0.15	0.45	0.09	0.09	1.96	3.62	4.35	2.74	1.08	0.22	0.09
13	0.56	0.32	0.50	0.09	0.09	2.10	3.58	4.19	2.64	1.09	0.23	0.09
14	0.41	0.67	0.60	0.09	0.08	1.90	3.62	4.09	2.56	1.05	0.23	0.09
15	0.35	0.78	0.68	0.09	0.09	1.86	3.67	4.20	2.92	0.90	0.14	0.09
16	0.40	0.81	0.74	0.09	0.09	1.93	3.59	4.26	3.41	0.79	0.08	0.09
17	0.84	0.78	0.73	0.09	0.09	1.97	3.56	4.11	3.58	0.72	0.07	0.09
18	1.08	0.86	0.70	0.09	0.09	2.18	3.64	3.91	3.50	0.66	0.07	0.09
19	1.02	0.79	0.70	0.09	0.08	2.17	3.63	3.84	3.36	0.66	0.07	0.08
20	0.88	0.67	0.79	0.09	0.08	1.98	3.57	3.91	3.31	0.67	0.07	0.07
21	0.72	0.59	0.71	0.09	0.08	1.96	3.56	3.99	3.25	0.58	0.07	0.07
22	0.60	0.50	0.58	0.09	0.08	1.82	3.68	3.92	3.13	0.43	0.09	0.07
23	0.54	0.47	0.62	0.09	0.08	1.64	4.02	3.75	3.10	0.30	0.09	0.08
24	0.44	0.49	0.85	0.09	0.08	1.35	4.20	3.59	2.97	0.24	0.09	0.09
25	0.28	0.45	1.59	0.09	0.08	1.08	4.16	3.52	2.76	0.59	0.09	0.08
26	0.24	0.41	1.67	0.09	0.08	0.99	4.06	3.54	2.57	2.20	0.09	0.07
27	0.21	0.35	1.47	0.09	0.08	1.17	3.93	3.53	2.33	2.92	0.09	0.07
28	0.19	0.28	1.28	0.09	0.08	1.43	3.83	3.45	2.10	3.11	0.09	0.15
29	0.21	0.26	1.01	0.09	0.08	1.98	3.79	3.43	2.29	3.03	0.09	0.30
30	0.24		0.89	0.09	0.08	2.64	3.87	3.45	2.47	2.82	0.09	0.29
31	0.33		1.08		0.08		3.90	3.48		2.48		0.30

Max WL observed	1.11	1.15	1.85	1.12	0.10	2.70	4.22	4.64	3.59	3.13	2.26	0.34
Day of Max WL	19	4	26	1	1	31	24	9	17	28	1	01 Jan 2013

**Zaragoza WL 2012**



**Water Level in meters (Daily Average)**

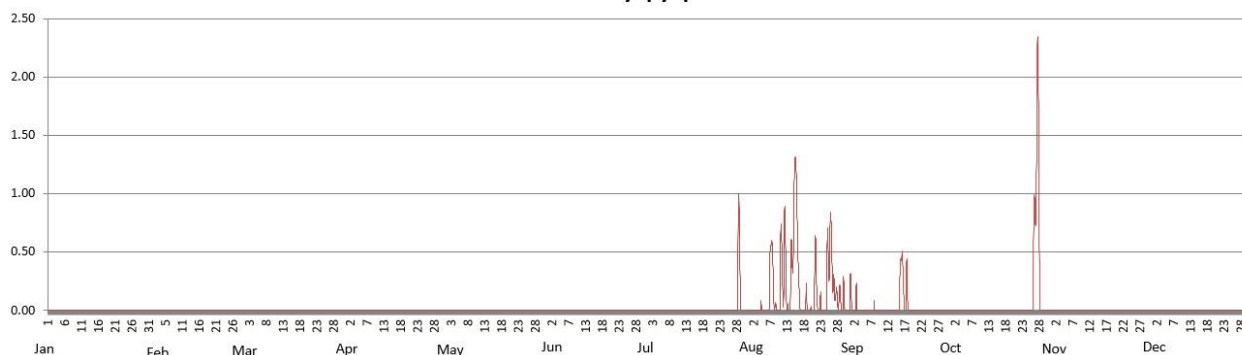
**2012**

Station: **Mayapyap**

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	0.02	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	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	0.02	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	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	0.36	0.01	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.01	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.11	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.38	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	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	0.22	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.75	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	1.63	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.11	0.00	0.04	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.09	0.00	0.00	0.00	0.00
30	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00		0.00		0.00		0.00	0.09		0.00		0.00

Max WL observed	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.32	0.51	2.35	0.00	0.00
Day of Max WL							29	15	16	27		

**Mayapyap WL 2012**

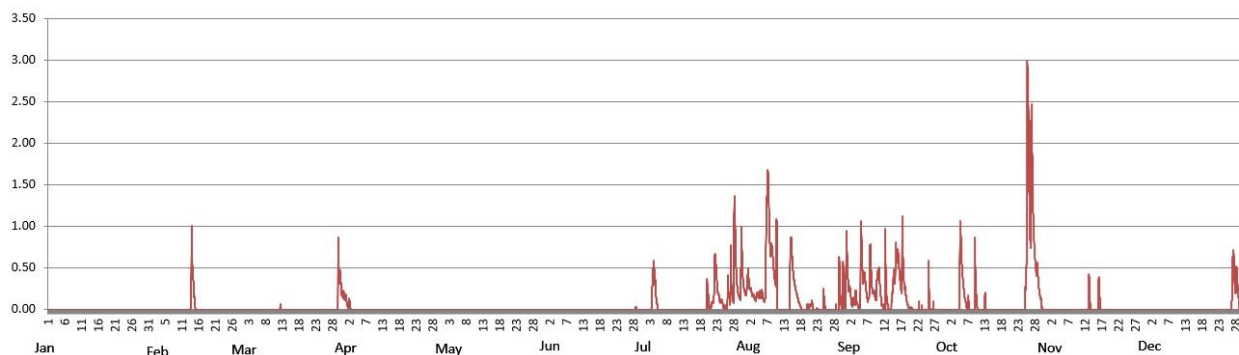


**Water Level in meters (Daily Average)**

2012		Station: Peñaranda										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.32	0.27	0.00	0.00	0.00
2	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.24	0.09	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.15	0.10	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.16	0.09	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.34	0.34	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.29	0.19	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23	0.33	0.05	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.30	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.19	0.24	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.38	0.05	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.06	0.00	0.00	0.00
12	0.00	0.00	0.01	0.00	0.00	0.00	0.00		0.26	0.02	0.00	0.00
13	0.00	0.36	0.00	0.00	0.00	0.00	0.00		0.02	0.00	0.13	0.00
14	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.62	0.17	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.54	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.54	0.00	0.11	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.47	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.04	0.01	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.01	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06	0.00	0.02	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.10	1.59	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.01	1.57	0.00	0.10
27	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.01	1.11	0.00	0.45
28	0.00	0.00	0.00	0.00	0.00	0.01	0.65	0.00	0.00	0.45	0.00	0.30
29	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.17	0.00	0.16	0.00	0.02
30	0.00		0.43	0.00	0.00	0.00	0.42	0.15	0.00	0.00	0.00	0.00
31	0.00		0.20		0.00		0.28	0.36		0.00		0.00

Max WL observed	0.00	1.01	0.87	0.18	0.03	0.00	1.37	1.68	1.12	3.00	0.43	0.72
Day of Max WL		13	30	1	28		29	8	17	25	13	27

**Peñaranda WL 2012**



**Water Level in meters (Daily Average)**

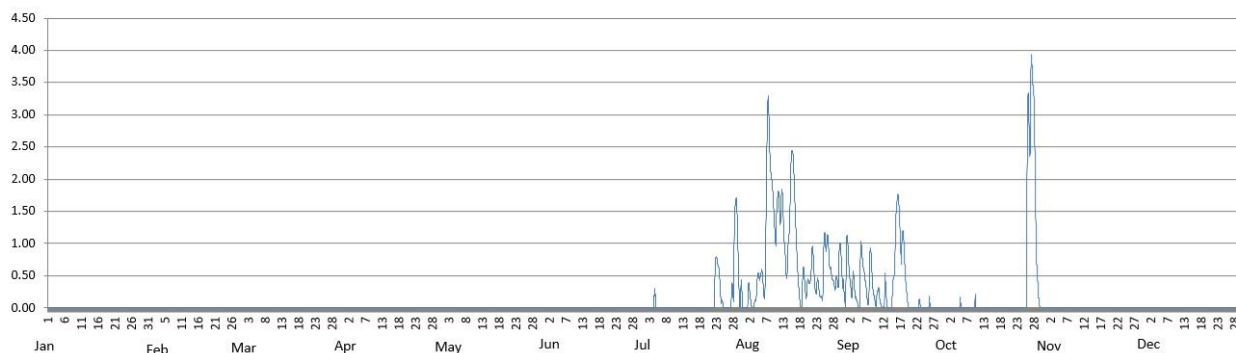
**2012**

Station: **San\_Isidro**

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	0.03	0.77	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.34	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.24	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.28	0.05	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.39	0.43	0.02	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.46	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82	0.23	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.62	0.65	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.12	0.01	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.25	0.03	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.03	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53	0.21	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.03	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.07	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.31	0.78	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.64	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.02	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.78	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.11	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.33	0.01	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.30	0.04	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.33	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.02	0.01	0.82	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.03	2.96	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.50	0.00	3.56	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.38	0.00	1.44	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.64	0.00	0.12	0.00	0.00
30	0.00		0.00	0.00	0.00	0.00	0.21	0.60	0.00	0.00	0.00	0.00
31	0.00		0.00		0.00		0.06	0.38		0.00		0.00

Max WL observed	0.00	0.00	0.00	0.00	0.00	0.00	1.71	3.29	1.77	3.94	0.00	0.00
Day of Max WL							29	8	16	27		

**San Isidro WL 2012**

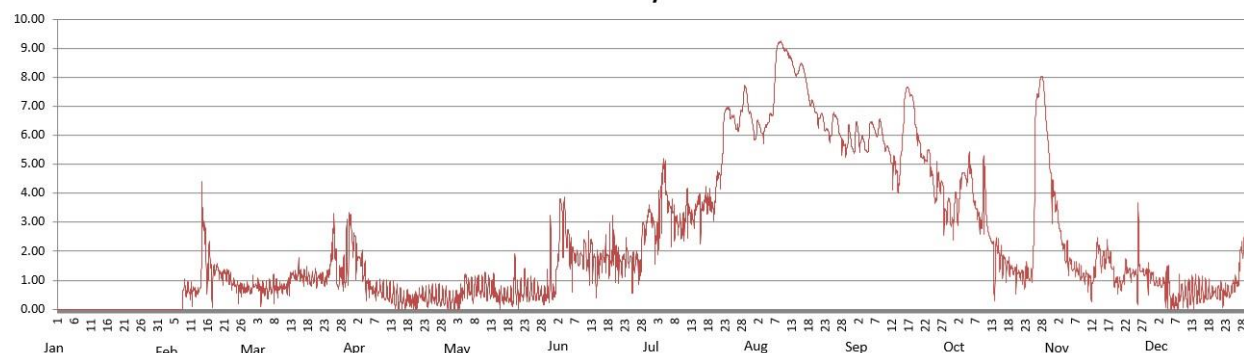


**Water Level in meters (Daily Average)**

2012		Station: Arayat										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1			0.78	2.24	0.27	0.66	2.94	5.93	6.24	3.74	3.40	0.93
2			0.79	1.79	0.37	1.80	2.46	6.40	5.74	3.45	2.67	0.89
3			0.78	1.64	0.35	3.50	3.29	6.12	5.84	4.59	2.15	0.88
4			0.66	1.21	0.56	2.99	4.56	6.16	5.45	4.59	1.79	0.82
5			0.68	1.00	0.74	2.70	4.36	6.30	5.81	4.72	1.70	0.83
6			0.70	0.73	0.70	1.63	3.49	6.70	6.33	4.49	1.39	0.23
7			0.74	0.61	0.60	1.84	3.31	7.73	6.02	3.65	1.33	0.21
8		0.79	0.75	0.61	0.78	1.73	2.99	9.10	6.42	3.26	1.23	0.32
9		0.65	0.71	0.68	0.74	1.83	2.87	9.19	5.92	3.02	1.13	0.53
10		0.60	0.74	0.52	0.73	2.00	2.76	8.97	5.57	4.26	1.14	0.53
11		0.60	0.76	0.53	0.81	1.65	3.45	8.83	5.41	2.75	0.98	0.51
12		0.57	0.84	0.46	0.75	1.99	3.32	8.63	4.97	2.35	1.00	0.60
13		1.07	1.19	0.46	0.71	1.62	3.08	8.23	4.81	1.32	1.88	0.63
14		3.03	1.13	0.37	0.49	1.23	3.44	8.15	4.53	2.08	1.97	0.56
15		1.47	1.27	0.38	0.34	1.61	3.65	8.44	6.02	1.65	1.70	0.57
16		1.67	1.13	0.26	0.44	1.77	3.49	8.19	7.50	1.67	1.83	0.54
17		0.99	1.14	0.34	0.45	1.76	3.78	7.59	7.48	1.54	1.75	0.52
18		1.42	1.05	0.31	0.42	1.67	3.71	7.11	7.24	1.42	1.33	0.51
19		1.23	1.04	0.28	0.40	2.22	3.52	6.97	6.30	1.27	0.95	0.60
20		1.16	1.11	0.28	0.98	1.64	3.99	6.56	5.77	1.23	0.84	0.58
21		1.23	1.06	0.49	0.49	1.58	4.57	6.66	5.26	1.18	0.90	0.54
22		1.10	1.13	0.45	0.60	1.68	5.19	6.38	5.13	1.08	1.36	0.51
23		0.88	0.99	0.34	0.86	1.95	6.81	6.19	5.35	1.27	1.31	0.60
24		0.81	1.19	0.51	0.54	1.68	6.88	5.96	4.58	1.12	1.20	0.58
25		0.68	1.90	0.49	0.65	1.35	6.63	6.62	3.98	3.21	1.13	0.84
26		0.71	2.32	0.39	0.54	1.67	6.39	6.54	4.37	7.29	2.06	0.98
27		0.67	0.97	0.40	0.55	1.37	6.29	5.97	4.18	7.90	1.33	1.96
28		0.68	1.28	0.40	0.50	2.76	6.91	5.70	3.26	7.55	1.24	2.14
29		0.66	1.08	0.37	0.43	2.96	7.59	5.57	3.62	6.10	1.23	1.81
30			2.16	0.29	0.61	3.35	7.00	6.03	2.94	4.71	1.15	1.70
31			2.80		1.41		6.57	5.49		3.97		1.29

Max WL observed		4.41	3.33	2.65	3.24	3.87	7.71	9.24	7.66	8.02	3.74	2.70
Day of Max WL		14	31	1	31	4	29	9	17	28	1	30

**Arayat WL 2012**



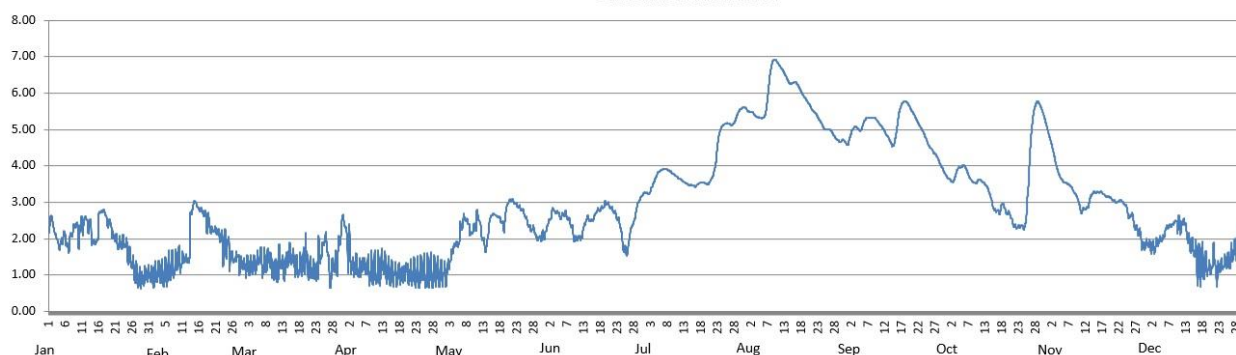


**Water Level in meters (Daily Average)**

2012		Station: <b>Candaba</b>										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.41	0.93	1.26	2.21	1.03	2.28	3.26	5.53	4.72	3.67	4.74	1.85
2	2.38	1.01	1.24	1.58	1.20	2.53	3.24	5.48	4.99	3.58	4.37	1.75
3	2.03	1.06	1.26	1.18	1.52	2.79	3.42	5.43	5.06	3.67	3.98	1.79
4	1.83	1.04	1.22	1.29	1.81	2.73	3.64	5.35	4.99	3.92	3.71	1.92
5	1.94	1.02	1.28	1.21	1.83	2.67	3.73	5.33	5.04	3.95	3.65	1.96
6	1.91	1.11	1.46	1.25	2.27	2.65	3.88	5.36	5.28	3.99	3.52	2.20
7	1.90	1.18	1.27	1.22	2.53	2.63	3.91	5.75	5.32	3.80	3.45	2.34
8	2.22	1.22	1.33	1.08	2.46	2.47	3.88	6.54	5.32	3.62	3.32	2.37
9	2.35	1.49	1.43	1.08	2.17	2.16	3.82	6.90	5.29	3.54	3.16	2.47
10	2.14	1.33	1.12	1.09	2.28	1.99	3.74	6.86	5.17	3.58	2.88	2.45
11	2.37	1.43	1.08	1.06	2.57	2.03	3.67	6.73	5.05	3.60	2.79	2.34
12	2.55	1.40	1.42	1.28	2.26	2.21	3.61	6.59	4.89	3.52	2.83	2.40
13	2.40	2.60	1.13	1.13	1.86	2.49	3.54	6.40	4.75	3.38	3.03	2.00
14	1.93	2.99	1.33	1.08	1.98	2.52	3.48	6.26	4.58	3.11	3.24	1.77
15	1.92	2.86	1.55	1.04	2.58	2.53	3.47	6.29	4.78	2.82	3.27	1.66
16	2.52	2.78	1.43	1.01	2.67	2.71	3.44	6.27	5.39	2.77	3.28	1.34
17	2.77	2.69	1.20	1.03	2.61	2.79	3.50	6.11	5.70	2.81	3.25	1.29
18	2.63	2.47	1.23	1.02	2.51	2.86	3.54	5.94	5.76	2.89	3.17	1.28
19	2.42	2.25	1.37	1.12	2.40	2.97	3.53	5.80	5.68	2.71	3.14	1.18
20	2.17	2.24	1.50	1.02	2.91	2.90	3.51	5.66	5.51	2.61	3.06	1.17
21	1.99	2.18	1.14	1.02	3.05	2.79	3.63	5.51	5.35	2.37	3.01	1.45
22	1.85	2.05	1.11	1.00	3.01	2.65	3.90	5.40	5.16	2.31	3.04	1.09
23	1.86	1.76	1.09	0.98	2.92	2.45	4.58	5.25	5.00	2.34	3.01	1.23
24	1.85	1.84	1.53	1.11	2.84	1.97	5.03	5.09	4.81	2.32	2.90	1.32
25	1.49	1.47	1.81	1.01	2.71	1.66	5.14	5.00	4.59	2.93	2.63	1.35
26	1.32	1.41	1.89	1.02	2.49	1.90	5.17	4.99	4.46	4.45	2.60	1.47
27	1.04	1.50	1.07	1.04	2.28	2.36	5.13	4.89	4.33	5.43	2.30	1.71
28	0.92	1.34	1.21	1.07	2.26	2.66	5.20	4.75	4.17	5.75	2.19	2.10
29	0.85	1.32	1.24	1.06	2.03	3.01	5.42	4.67	3.98	5.66	1.87	2.33
30			1.87	1.05	2.02	3.18	5.57	4.71	3.80	5.40	1.81	2.28
31			2.51		2.09		5.60	4.62		5.07		2.09

Max WL observed	2.81	3.04	2.66	2.40	3.10	3.24	5.62	6.93	5.77	5.78	4.90	2.63
Day of Max WL	18	14	31	2	22	31	31	9	18	28	1	10

**Candaba WL 2012**

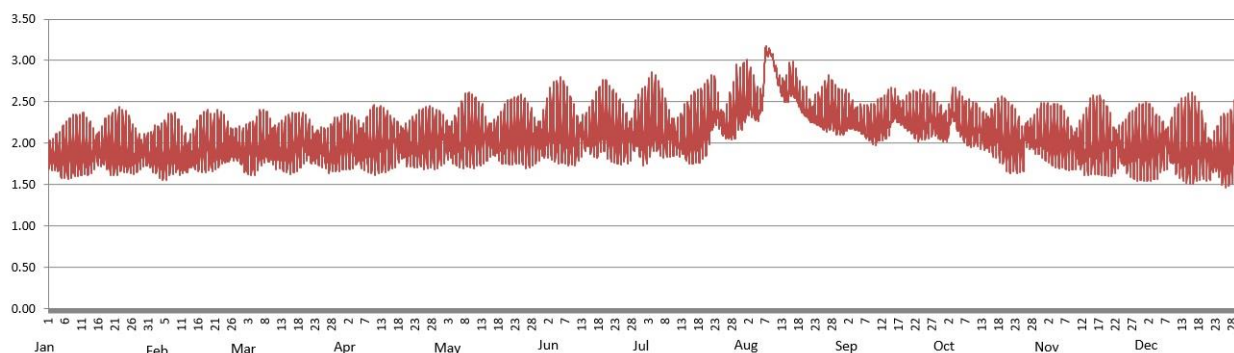


**Water Level in meters (Daily Average)**

2012		Station: Sasmuan										
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1.88	1.87	1.88	2.03	2.06	2.09	2.11	2.52	2.32	2.21	2.07	1.98
2	1.85	1.92	1.92	2.01	2.05	2.14	2.13	2.55	2.31	2.25	2.05	1.97
3	1.84	1.90	1.94	2.00	2.03	2.14	2.22	2.50	2.30	2.41	2.03	1.97
4	1.83	1.89	1.94	1.99	2.00	2.15	2.25	2.46	2.27	2.39	2.04	1.94
5	1.85	1.88	1.95	1.99	2.01	2.17	2.25	2.44	2.26	2.34	2.04	1.94
6	1.88	1.93	2.02	1.95	2.03	2.20	2.21	2.51	2.21	2.24	2.02	2.00
7	1.89	1.94	2.00	1.95	2.05	2.19	2.17	2.95	2.19	2.20	1.99	1.99
8	1.90	1.93	2.02	1.96	2.08	2.12	2.15	3.10	2.19	2.20	1.97	1.94
9	1.91	1.89	2.00	1.97	2.09	2.11	2.12	3.07	2.18	2.19	1.95	1.97
10	1.90	1.86	1.98	1.96	2.10	2.08	2.10	2.93	2.19	2.19	1.94	1.97
11	1.93	1.85	1.95	1.98	2.10	2.09	2.07	2.78	2.22	2.16	1.95	2.00
12	1.90	1.83	1.93	2.01	2.10	2.10	2.04	2.66	2.23	2.12	1.95	1.96
13	1.88	1.86	1.92	2.02	2.10	2.11	2.07	2.61	2.27	2.12	1.97	1.97
14	1.89	1.88	1.93	2.03	2.08	2.09	2.06	2.63	2.30	2.12	2.03	1.98
15	1.93	1.92	1.95	2.03	2.06	2.11	2.07	2.70	2.39	2.14	2.05	1.98
16	1.91	1.98	1.99	2.03	2.05	2.13	2.08	2.67	2.41	2.14	2.04	1.99
17	1.91	2.00	2.02	2.04	2.02	2.15	2.11	2.59	2.37	2.15	2.03	1.97
18	1.94	2.01	2.01	2.01	2.02	2.23	2.12	2.50	2.34	2.11	2.02	1.97
19	1.94	1.98	2.03	2.00	2.01	2.28	2.16	2.43	2.31	2.07	2.01	1.91
20	1.94	1.95	2.02	1.98	2.06	2.21	2.21	2.42	2.30	2.03	1.97	1.85
21	1.95	1.99	2.01	1.97	2.07	2.16	2.30	2.37	2.28	2.00	1.93	1.83
22	1.98	1.99	1.95	1.98	2.08	2.12	2.40	2.37	2.26	2.01	1.94	1.85
23	1.96	1.99	1.95	1.99	2.10	2.11	2.43	2.36	2.26	1.98	1.94	1.85
24	1.94	1.98	1.96	2.01	2.11	2.10	2.36	2.35	2.28	1.93	1.93	1.85
25	1.92	1.96	1.94	2.01	2.11	2.11	2.26	2.35	2.27	1.97	1.91	1.85
26	1.88	1.97	1.90	2.03	2.09	2.10	2.21	2.38	2.29	2.11	1.94	1.85
27	1.87	1.94	1.87	2.05	2.08	2.09	2.22	2.40	2.28	2.10	1.95	1.88
28	1.87	1.92	1.90	2.03	2.09	2.13	2.27	2.35	2.27	2.07	1.96	1.95
29	1.88	1.90	1.95	2.05	2.07	2.17	2.39	2.30	2.24	2.08	1.96	1.97
30	1.91		1.96	2.06	2.07	2.13	2.43	2.27	2.22	2.10	1.97	1.98
31	1.89		2.00		2.08		2.44	2.27		2.08		1.96

Max WL observed	2.44	2.40	2.40	2.46	2.61	2.80	2.95	3.17	2.67	2.67	2.58	2.62
Day of Max WL	22	18	6	10	9	6	30	8	15	4	16	16

**Sasmuan WL 2012**



**Water Level in meters (Daily Average)**

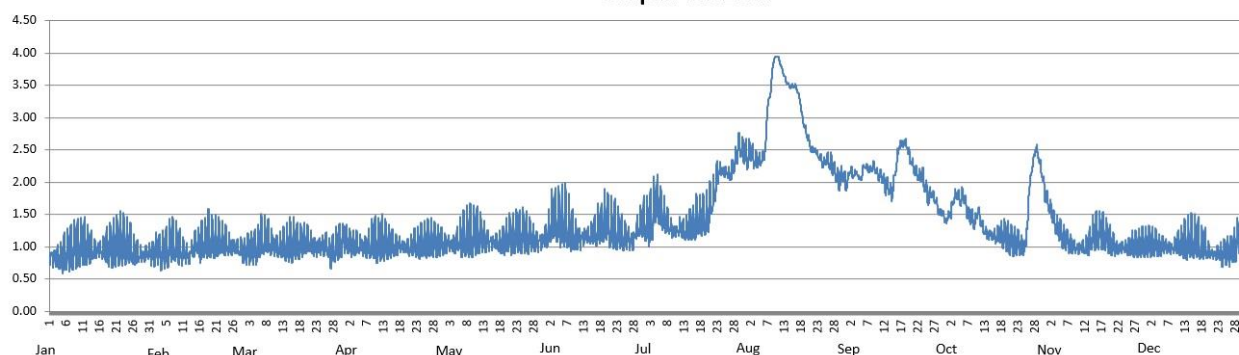
**2012**

Station: **Sulipan**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.86	0.88	0.92	1.11	1.03	1.12	1.32	2.37	2.12	1.46	1.62	1.04
2	0.84	0.95	0.96	1.05	1.04	1.25	1.28	2.44	2.14	1.56	1.47	1.04
3	0.84	0.93	0.98	1.02	1.03	1.40	1.41	2.35	2.14	1.75	1.32	1.03
4	0.83	0.92	0.97	1.00	1.02	1.34	1.62	2.32	2.08	1.79	1.24	1.00
5	0.85	0.93	0.99	1.01	1.05	1.33	1.62	2.33	2.11	1.76	1.20	0.99
6	0.91	0.99	1.07	0.98	1.06	1.33	1.50	2.42	2.24	1.74	1.11	1.01
7	0.93	1.01	1.08	0.97	1.12	1.31	1.41	2.96	2.20	1.55	1.05	1.00
8	0.97	1.00	1.08	0.98	1.14	1.24	1.34	3.40	2.22	1.46	1.01	0.97
9	0.98	0.95	1.03	1.02	1.17	1.18	1.28	3.85	2.19	1.38	0.98	1.01
10	0.98	0.90	1.01	1.03	1.18	1.14	1.25	3.94	2.09	1.52	0.98	1.03
11	1.00	0.87	0.97	1.04	1.18	1.12	1.26	3.85	2.07	1.40	1.00	1.05
12	0.95	0.85	0.97	1.07	1.16	1.15	1.26	3.69	1.94	1.26	1.00	1.03
13	0.93	0.93	0.98	1.07	1.13	1.16	1.24	3.55	1.91	1.19	1.04	1.04
14	0.92	1.04	1.01	1.05	1.09	1.15	1.25	3.48	1.86	1.20	1.16	1.08
15	0.93	1.01	1.04	1.03	1.07	1.18	1.32	3.49	2.13	1.17	1.20	1.07
16	0.94	1.06	1.06	1.01	1.06	1.20	1.30	3.45	2.47	1.16	1.21	1.05
17	0.95	1.07	1.06	1.01	1.04	1.26	1.41	3.26	2.59	1.18	1.21	0.99
18	0.99	1.10	1.04	0.99	1.03	1.31	1.40	2.96	2.61	1.15	1.16	0.99
19	0.99	1.07	1.06	0.98	1.05	1.38	1.41	2.77	2.49	1.13	1.09	0.93
20	1.00	1.04	1.05	0.97	1.12	1.30	1.47	2.60	2.31	1.07	1.03	0.89
21	1.02	1.06	1.04	0.99	1.12	1.25	1.68	2.50	2.17	1.05	0.98	0.88
22	1.05	1.06	0.97	1.00	1.14	1.23	1.84	2.47	2.10	1.04	0.99	0.89
23	1.02	1.04	0.97	0.99	1.18	1.21	2.12	2.38	2.10	1.03	0.99	0.90
24	1.00	1.01	1.00	1.04	1.16	1.15	2.20	2.30	1.95	0.98	0.99	0.88
25	0.98	0.98	0.99	1.05	1.19	1.15	2.17	2.32	1.76	1.21	0.97	0.92
26	0.91	0.99	1.00	1.08	1.15	1.13	2.14	2.30	1.82	1.95	1.02	0.91
27	0.87	0.97	0.88	1.09	1.14	1.11	2.13	2.21	1.74	2.31	1.00	0.98
28	0.87	0.95	0.94	1.07	1.12	1.20	2.25	2.11	1.60	2.49	1.02	1.06
29	0.86	0.94	1.00	1.06	1.08	1.30	2.46	2.01	1.54	2.31	1.03	1.13
30	0.90		1.04	1.06	1.08	1.33	2.51	2.10	1.45	2.05	1.04	1.11
31	0.90		1.12		1.12		2.43	1.99		1.76		1.03

Max WL observed	1.56	1.59	1.51	1.51	1.68	1.98	2.77	3.95	2.68	2.58	1.74	1.52
Day of Max WL	22	18	6	12	9	7	30	10	19	28	2	15

**Sulipan WL 2012**



**Water Level in meters (Daily Average)**

**2012**

Station: **Mexico**

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	0.51	0.92	1.14	0.74	0.20
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.90	1.35	0.72	0.21
3	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.46	0.87	1.69	0.70	0.21
4	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.48	0.79	1.32	0.68	0.22
5	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.56	0.91	1.28	0.51	0.22
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.88	1.19	0.61	0.22
7	0.00	0.00	0.00	0.00	0.06	0.00	0.00	2.86	0.95	1.16	0.60	0.19
8	0.00	0.00	0.00	0.00	0.01	0.00	0.00	2.31	0.92	1.12	0.55	0.18
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.90	1.10	0.50	0.18
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84	1.10	1.01	0.47	0.14
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78	0.99	1.07	0.45	0.11
12	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.66	0.94	1.01	0.45	0.02
13	0.00	0.00	0.00	0.00	0.00	0.00	0.06	1.62	0.48	0.94	0.50	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1.71	0.72	0.88	0.42	0.01
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68	1.76	0.83	0.38	0.02
16	0.05	0.00	0.00	0.00	0.00	0.00	0.00	1.60	1.27	0.82	0.37	0.08
17	0.00	0.00	0.00	0.00	0.00	0.02	0.00	1.47	1.20	0.79	0.38	0.01
18	0.00	0.00	0.00	0.00	0.00	0.01	0.00	1.44	1.16	0.33	0.38	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41	1.39	0.32	0.38	0.01
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.37	1.41	0.40	0.41	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.33	1.35	0.46	0.41	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	1.01	1.33	1.30	0.52	0.37	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.34	1.34	0.33	0.35	0.00
24	0.00	0.00	0.21	0.00	0.00	0.00	0.76	1.26	1.29	0.46	0.34	0.00
25	0.00	0.00	0.01	0.00	0.00	0.00	0.62	1.23	1.26	1.00	0.32	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.11	1.22	0.97	0.30	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.92	1.35	0.85	0.31	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.94	1.22	0.80	0.29	0.00
29	0.00	0.00	0.00	0.00	0.00	0.05	0.55	0.83	1.18	0.79	0.22	0.00
30	0.00		0.00	0.00	0.00	0.00	0.55	0.96	1.15	0.77	0.19	0.00
31	0.00		0.00		0.00		0.51	0.89		0.76		0.00

Max WL observed	0.40	0.00	1.18	0.00	0.56	0.59	1.97	3.46	3.53	2.99	0.79	0.23
Day of Max WL	16		24		8	29	22	7	15	3	2	4

**Mexico WL 2012**

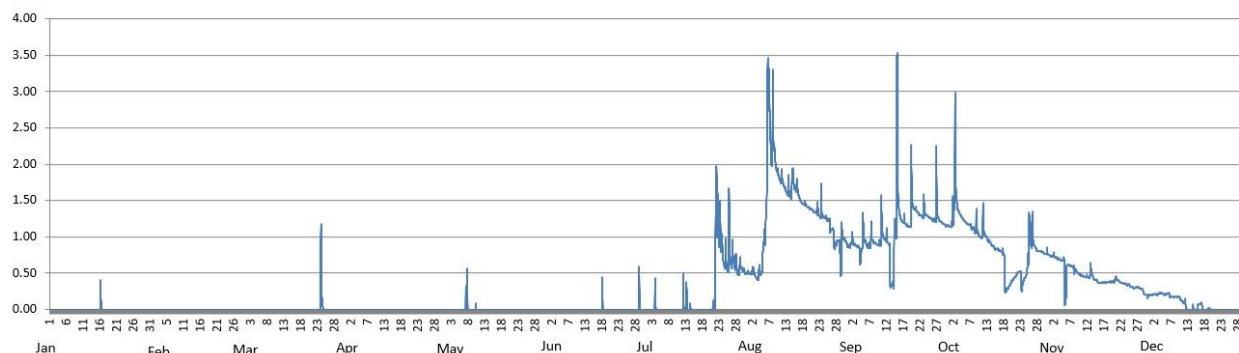


Table 2.0

## Maximum WL recorded per station for the year 2012

Station	January	February	March	April	May	June	July	August	September	October	November	December
Sapang Buho	0.03	0.86	0.77	0.20	0.14	0.92	2.47	2.72	2.21	4.38	0.73	0.49
Zaragoza	1.11	1.15	1.85	1.12	0.10	2.70	4.22	4.64	3.59	3.13	2.26	0.34
Mayapyap	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.32	0.51	2.35	0.00	0.00
Penaranda	0.00	1.01	0.87	0.18	0.03	0.00	1.37	1.68	1.12	3.00	0.43	0.72
San Isidro	0.00	0.00	0.00	0.00	0.00	0.00	1.71	3.29	1.77	3.94	0.00	0.00
Arayat		4.41	3.33	2.65	3.24	3.87	7.71	9.24	7.66	8.02	3.74	2.70
Candaba	2.81	3.04	2.66	2.40	3.10	3.24	5.62	6.93	5.77	5.78	4.90	2.63
Sasmuan	2.44	2.40	2.40	2.46	2.61	2.80	2.95	3.17	2.67	2.67	2.58	2.62
Sulipan	1.56	1.59	1.51	1.51	1.68	1.98	2.77	3.95	2.68	2.58	1.74	1.52
Mexico	0.40	0.00	1.18	0.00	0.56	0.59	1.97	3.46	3.53	2.99	0.79	0.23

Note: Shaded cell indicates maximum WL recorded for the station during the year



## C. ANNEX

Table A-1.

Maximum Rainfall for a given sliding time period during the year 2012																	
Sliding time period (minimum time period of 1 hour)	Rainfall Stations																
	Munoz	Sapang Buho	Gabaldon	Zaragoza	Mayapyap	Peñaranda	Calaanan	Palali	San Isidro	Arayat	Candaba	Sibul Spring	Sasmuan	Sulipan	Mexico	Porac	San Rafael
1 hr	45	50	37	64	68	44	67	47	48	43	43	56	44	30	34	52	78
2 hrs	54	66	50	110	80	48	82	74	48	56	51	61	86	51	51	56	102
3 hrs	58	78	60	116	80	52	83	80	50	59	53	64	115	62	65	66	102
4 hrs	59	85	69	117	80	63	83	81	58	59	54	74	136	72	76	78	102
5 hrs	70	86	88	117	81	73	83	81	61	67	54	80	155	81	85	82	102
6 hrs	74	86	100	117	84	82	83	81	69	77	55	89	180	92	96	94	104
7 hrs	75	86	109	117	84	86	83	81	81	83	59	96	189	100	104	106	106
8 hrs	75	86	121	117	85	87	83	81	92	92	65	100	191	110	114	117	106
9 hrs	75	86	133	117	86	96	83	81	100	97	72	106	213	117	123	125	111
10 hrs	75	86	138	117	86	103	83	81	106	103	78	110	215	121	127	131	116
11 hrs	75	86	144	117	86	112	83	81	117	111	83	123	218	129	133	137	122
12 hrs	75	86	156	117	87	115	83	81	119	118	88	127	221	143	142	144	133
18 hrs	75	87	193	117	88	117	83	88	145	168	124	133	298	210	184	194	180
24 hrs	75	93	241	136	125	132	114	99	164	199	149	151	357	257	226	236	219
48 hrs (2 days)	102	109	390	165	145	158	129	138	203	263	202	192	588	399	285	320	333
72 hrs (3 days)	121	156	422	200	157	167	175	146	217	301	232	221	691	494	340	381	408
96 hrs (4 days)	145	169	432	227	172	190	201	162	240	354	261	267	769	535	388	433	437
120 hrs (5 days)	184	172	432	239	188	234	202	173	255	373	277	290	787	547	427	468	458
144 hrs (6 days)	214	176	433	251	197	258	203	180	262	379	289	292	811	552	445	472	478
240 hrs (10 days)	294	261	435	307	262	320	283	261	300	422	340	338	925	626	489	552	540
480 hrs (20 days)	442	414	467	483	426	483	465	474	492	621	442	535	1194	842	682	740	893
Meteorological day (8 am to 8 am)	75	86	205	117	87	116	83	88	141	158	132	134	262	192	176	159	174
Max monthly total	482	543	603	503	535	436	567	505	413	535	427	489	1046	717	569	766	698

The maximum monthly total values for some stations may be smaller than their 480 hours (20 days) of sliding time total. This means that the 20-day total transcends 2 succeeding months. Likewise, the 24-hour unrestricted sliding time period is relatively much larger than the meteorological day (fixed 8am to 8am) total.

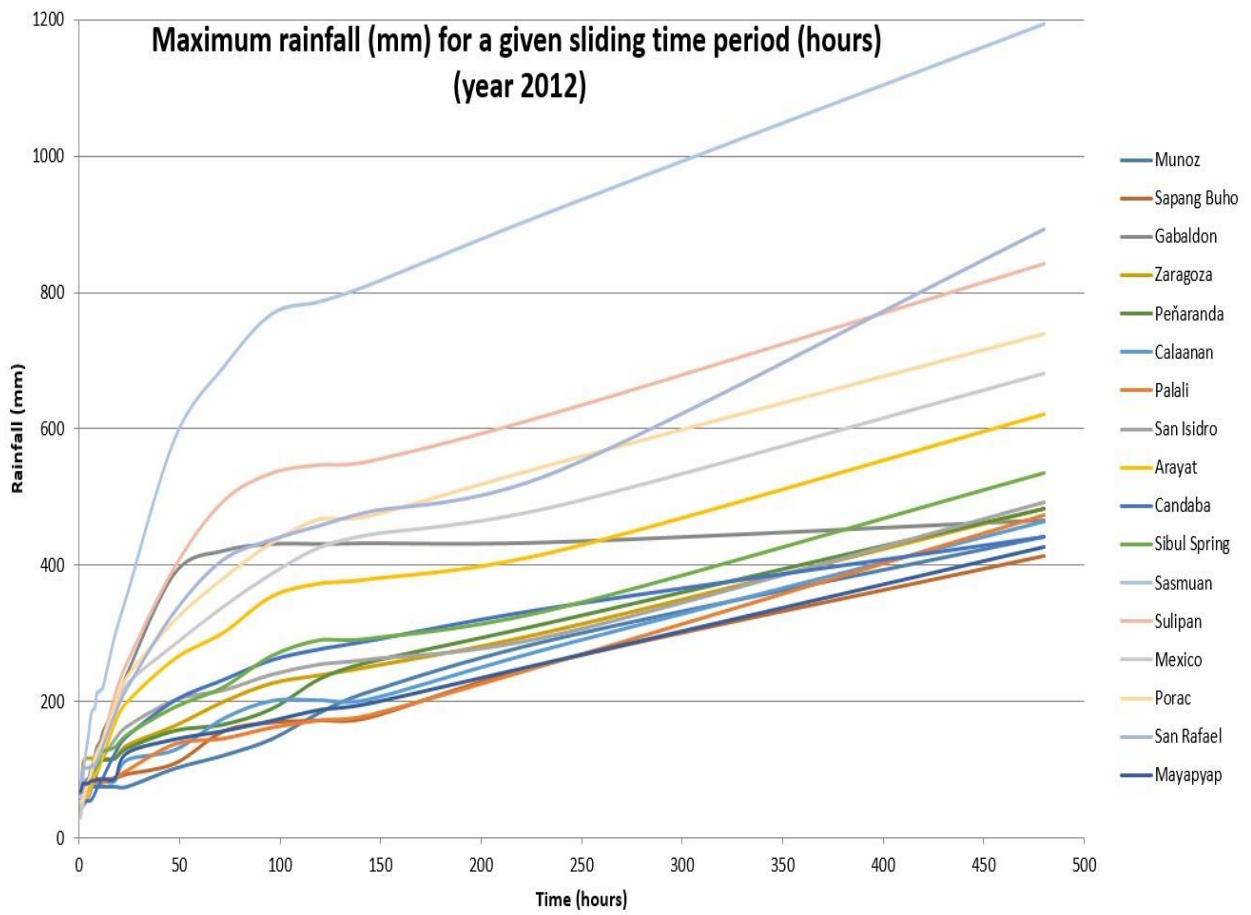


Figure AA-1. The sliding time period per station graph.



Table A-2. PRFFWC Existing Flood Warning Assessment Levels (SG in meters)

Color code	YELLOW	ORANGE	RED
<b>STATION</b>	<b>ALERT</b>	<b>ALARM</b>	<b>CRITICAL</b>
<b>Sapang Buho</b>	<b>3.70</b>	<b>4.50</b>	<b>6.50</b>
<b>Mayapyap</b>	<b>3.00</b>	<b>3.50</b>	<b>4.50</b>
<b>Zaragoza ++</b>	<b>11.00</b>	<b>12.50</b>	<b>14.50</b>
<b>Penaranda</b>			
<b>San Isidro +</b>	<b>3.20</b>	<b>4.50</b>	<b>6.00</b>
<b>Arayat</b>	<b>5.00</b>	<b>6.00</b>	<b>8.50</b>
<b>Candaba</b>	<b>3.00</b>	<b>4.50</b>	<b>5.00</b>
<b>Mexico</b>			
<b>Sasmuan +</b>			<b>2.90 *</b>
<b>Sulipan +</b>	<b>3.60 (2.50)</b>	<b>4.20 (3.00)</b>	<b>5.00 (3.50)</b>

\* Based on past observations from various flood events (for validation)

+ for updating of assessment levels (Sulipan values in parenthesis are proposed assessment levels)

++ assessment values are in MSL

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	$Q = 4.015 (H - (-2.94))^2 \cdot 2.961^*$	$0 < H \leq 3.4$
Zaragoza	10.213	$Q = 12.111 (H - 0.0)^2$	(for validation)
Peñaranda	22.498**	$Q = 2.30 (H - (-1.20))^2$	$0 < H \leq 4.0$
San Isidro	9.585	$Q = 15.2 (H - (-1.70))^2$	$0 < H \leq 8.0$
Arayat	0.077	$Q = 9.106 (H - (-0.39))^2$	$0 < H \leq 9.0$
Candaba	-0.157	$Q = 1.80 (H - (-1.30))^2$	$0 < H \leq 2.0$
Sasmuan	-1.147	$Q = 1.50 (H - (-2.0))^2$	$0 < H \leq 2.0$
Sulipan	-0.062	$Q = 9.50 (H - (-0.4))^2$	$0 < H \leq 3.0$
Mexico	5.933**	$Q = 11.0 (H - (-0.50))^2$	$0 < H \leq 3.0$

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 PRFFWC streamgaging sites. Rating curve equations remains the latest available for now. The RCs should be updated regularly.

Water Level Percent Duration Curves of some stations

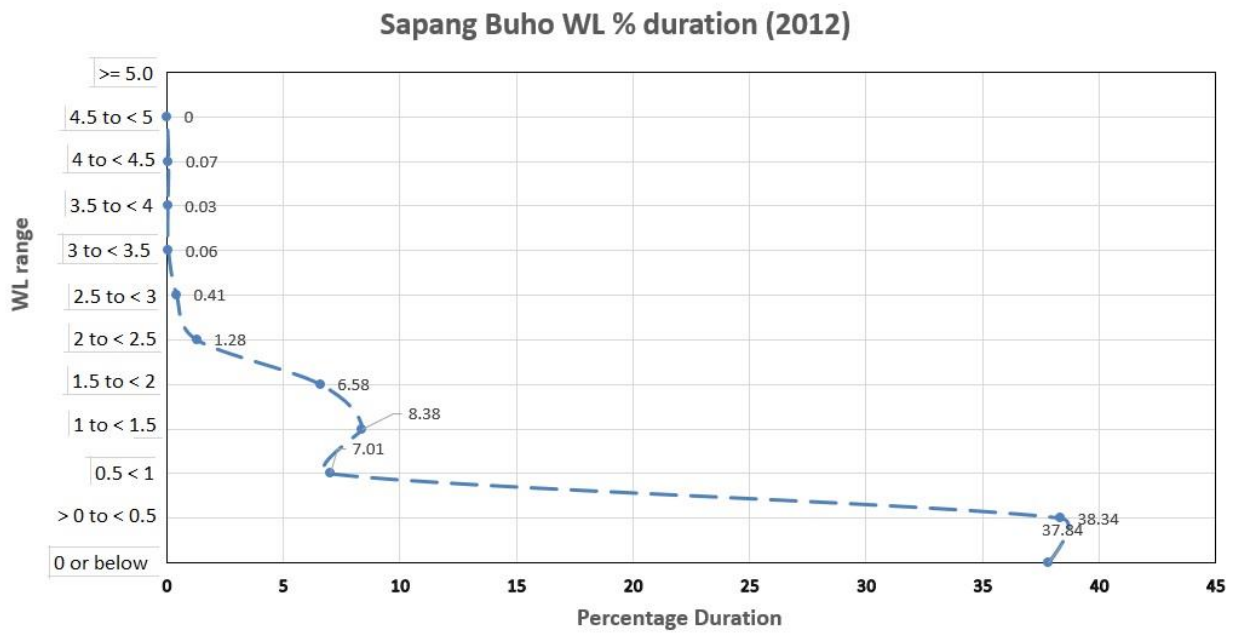


Figure AA-2. Sapang Buho WL percent duration curve (2012)

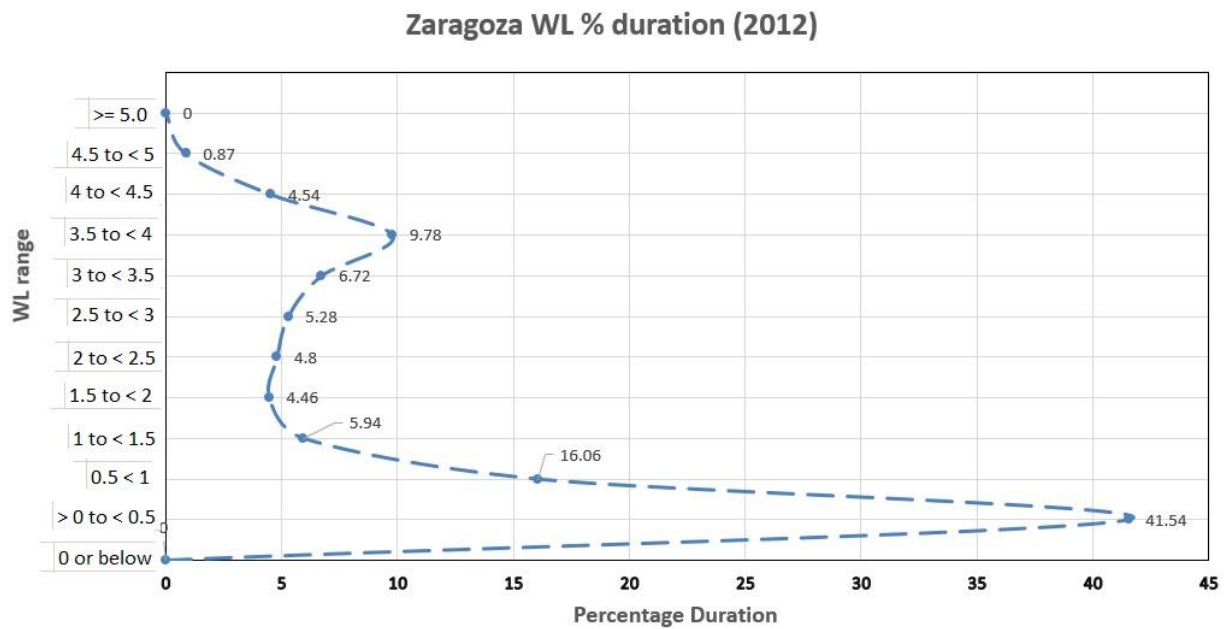


Figure AA-3. Zaragoza WL percent duration curve (2012)

### Arayat WL % duration (2012)

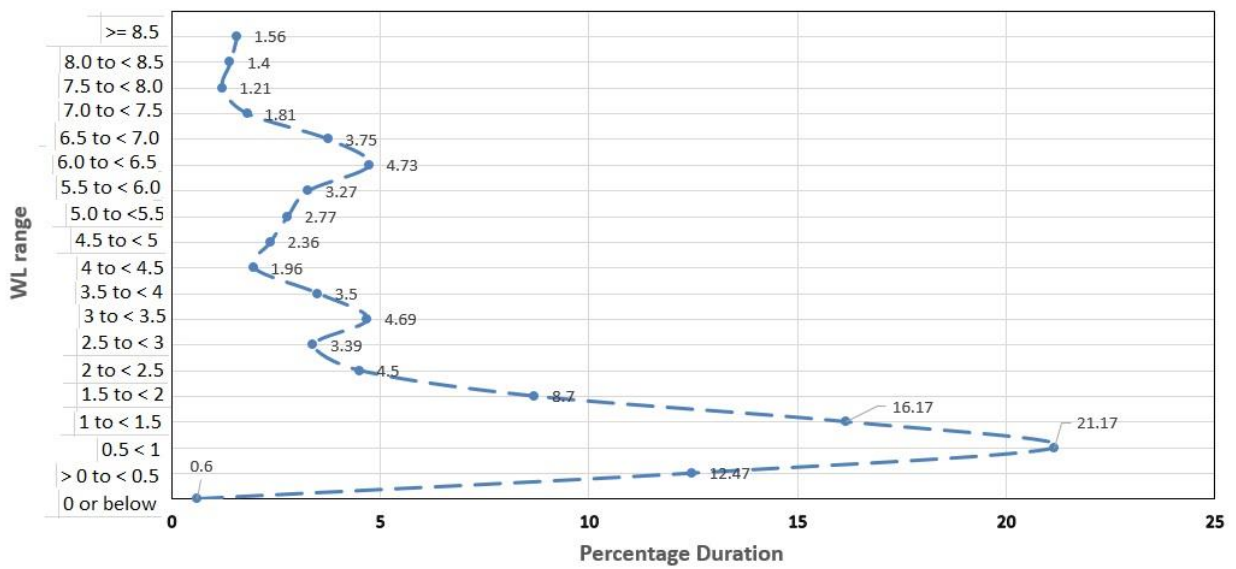


Figure AA-4. Arayat WL percent duration curve (2012)

### Candaba WL % duration (2012)

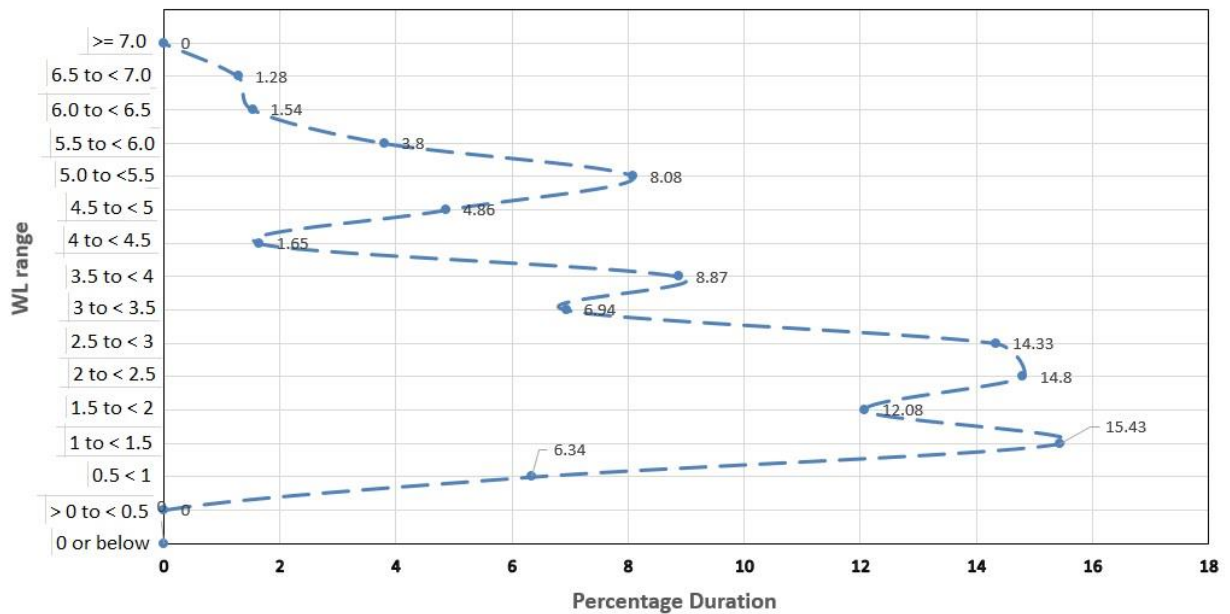


Figure AA-5. Candaba WL percent duration curve (2012)

### Sasmuan WL % duration (2012)

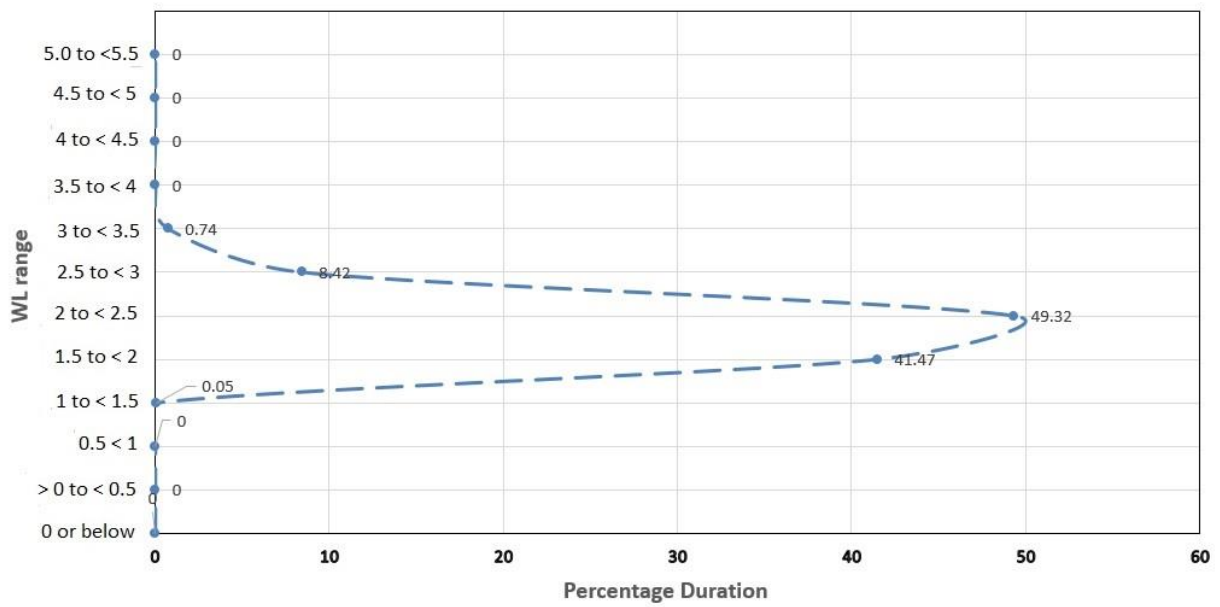


Figure AA-6. Sasmuan WL percent duration curve (2012)

### Sulipan WL % duration (2012)

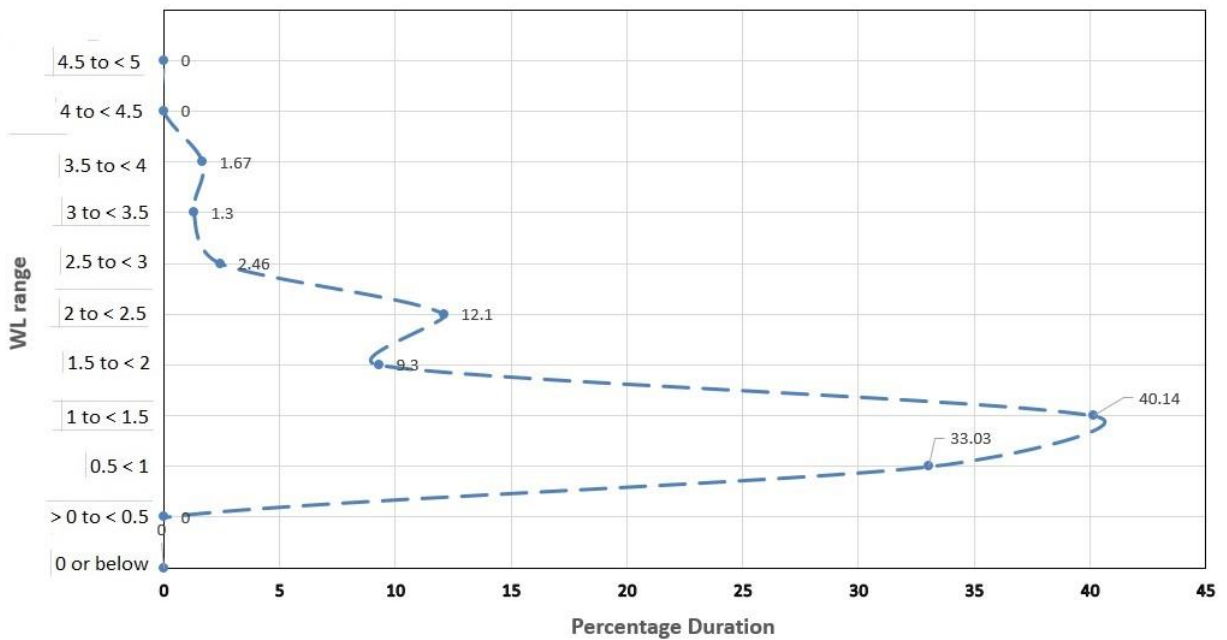


Figure AA-7. Sulipan WL percent duration curve (2012)

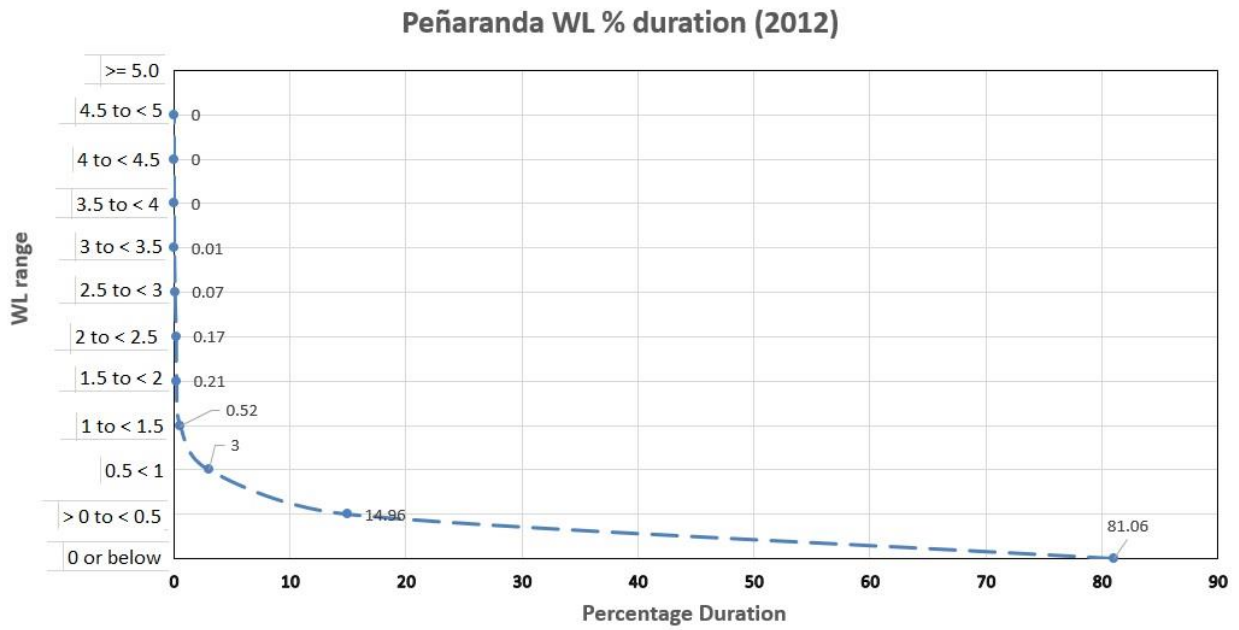


Figure AA-8. Peñaranda WL percent duration curve (2012)

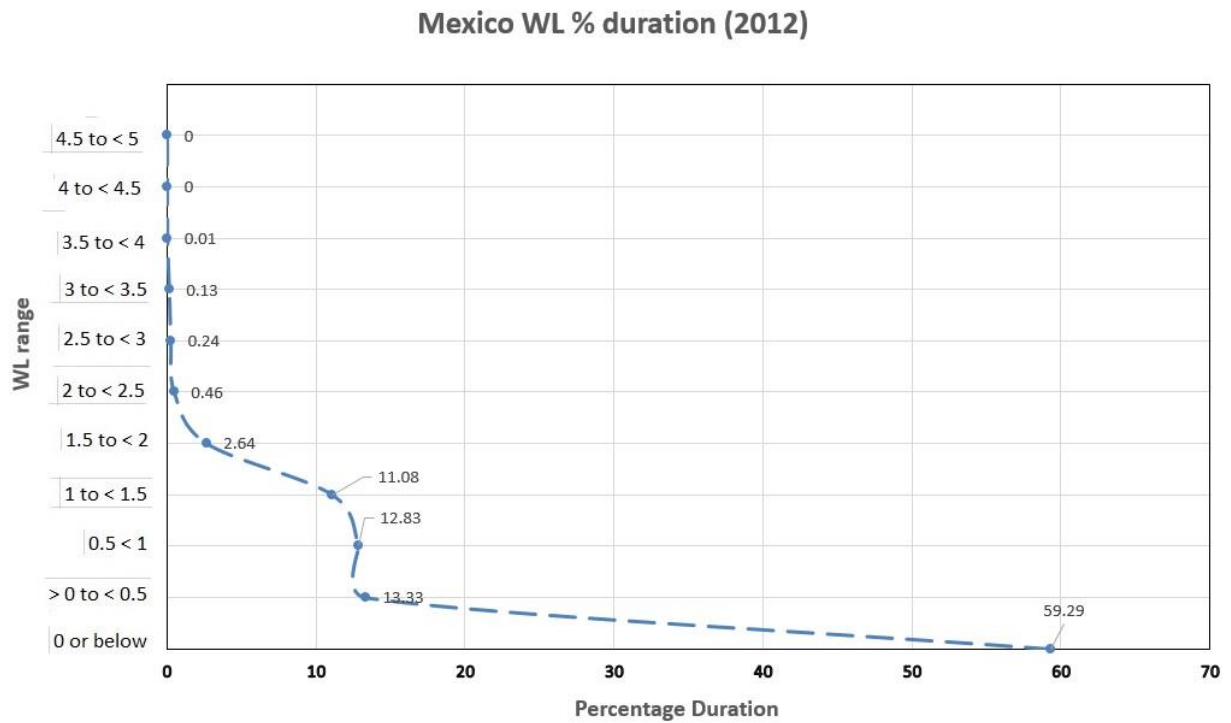


Figure AA-9. Mexico WL percent duration curve (2012)

*Note: The other WL stations were not included in WL percent duration curves as most of their observations are either erroneous, and / or zero such as for San Isidro and Mayapyap stations.*



PRFFWC report 2021

PRFFWC Contact details:

Cell phone: (0999) 336 6416

E-mail: [prffwc@gmail.com](mailto:prffwc@gmail.com)

Facebook: Prffwc Pagasa (or just search for PRFFWC)

Twitter: @PRFFWC

Website: [www.prffwc.synthasite.com](http://www.prffwc.synthasite.com)

Back cover: Candaba RR-WL Telemetry Station (July 24, 2012)

