

MATTHIEU LAKE MONITORING RECORDS

December 1997 to July 2011

Transcribed/Compiled by
Arlington James
November 2011



MATTHIEU MONITORING RECORDS

During the second half of November 1997, some mega-landslides that occurred in the Carholm area resulted in the impounding of the Matthieu River, a small tributary of the Layou River. The huge natural dam which was created by the landslides was initially estimated to have been over 100ft in height. Height measurements taken several months after the lake was formed revealed that the bottom of **Matthieu Lake** a.k.a. Miracle Lake, was perched precariously some 80 or so feet above the level of the confluence of the Layou and Mattheu Rivers.

Monitoring of the water levels of the Matthieu Lake began on 12th December 1997, when a team comprising personnel from the Police/SSU, Office of Disaster Management (Cecil Shillingford), and the Forestry, Wildlife & Parks Division (Michael Zamore, Arlington James) installed four (4) locally-made, wooden, 10ft staff gauges in the area where the water was backing up. Gauge No. 1 was installed (on a tree) with its bottom/foot (0 ft) just touching the surface of the water in the lake.

On 9th January 1998, Zamore & James, with the aid of a dinghy, a length of rope and a sinker, established the depth of the lake which was found to be 48½ft at the time, and the corresponding gauge reading on that day was 14¼ft (a difference of 32¼ feet which would have to be added to all subsequent gauge readings).

In the early stages of the life of “Matthieu”, monitoring was conducted weekly until early January 1998, when monitoring/visitation was sometimes conducted almost daily. Later that month the lake began showing some short cyclical fluctuations in levels, following which the monitoring with intensified to 24-hour observations from Gould, with a group even camping out in that area.

Some time during the last week of February 1998, water was first observed leaving the lake through extreme dampness on the face of the landslide plug overlooking the Layou River. That observation was made by the SSU team. Subsequently, the level of the lake began to drop and rise with the rains.

The Matthieu Lake levels were monitored over a 13-years, 8 months period. Every attempt was made to conduct a site visit on the last working day of each year so as to establish the net change in water levels from one year to the next. We also visited shortly after any significant rainfall event, such as Hurricane Georges (September 1998), Hurricane Lenny (November 1999) and Hurricane Dean (August 2007 – which resulted in an increase in the lake’s water levels of about 8ft).

It should be noted that as the water level in the lake rose we installed additional gauges, and by the time that the Matthieu Dam collapsed in July 2011, and gauges were no longer needed, we had installed an

additional 6 gauges of similar length to the first four which had been installed in December 1997.

In addition to the “regular” monitoring personnel, persons from the Dominica Amateur Radio Club, the Dominica Fire & Ambulance Services, DOMLEC, DOWASCO, students on attachment to the Forestry Division, a team from the Université des Antilles-Guyane, students and a lecturer from the State University of New York and others also accompanied monitoring personnel during their site visits.

Matthieu Lake experienced a bloom of blue green algae which was first observed on 15th August 2008, and last seen at the end of December 2010. With the ashfall experienced from the Montserrat Volcano in February 2010, the colour of the lake assumed a yellowish-green colour for several weeks thereafter.

Apart from the personnel from the SSU and the ODM, many members of staff of the Forestry, Wildlife & Parks Division were involved in the monitoring of the lake over the latter’s 13+ years of existence. The Forestry staff included:

CJ = Cyrille John
 AJ = Arlington James
 ST = Stephen Toussaint
 MM = Matthew Maximea
 RW = Randolph Winston
 NH = Nigel Harve
 MPZ = Michael Zamore

PM = Phillip Matthew
 RC = Ronald Charles
 RanC = Randy Charles
 MJ = Mervin Jolly
 LP = Luana Prevost
 SD = Stephen Durand
 AG = Albert Gallion
 LP = Lloyd Pascal
 FE = Felix Eugene
 BT = Benson Tyson
 AB = Alexander Beaupierre
 MG = McDonald Greenaway
 LB = Lenis Bruno
 MB = Minchinton Burton
 BJB = Bertrand Jno. Baptiste
 JA = Jacqueline Andre
 MS = Machel Sulton
 PJ = Paul Joseph
 AL = Ashton Lugay
 BR = Bryant Rolle
 KF = Kelvin Felix
 MS = Miguel Shillingford
 MG – Meckeith George

The following are the lake levels recorded and other observations made during the site visits. Two photos taken in the area where monitoring took place until the dam collapsed on 27th July 2011 are included for interest.

Arlington James, 3 October 2023

MATTHIEU MONITORING
Water Levels, Converted Water Depths, Observers, General Observations

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
12 Dec 97	0	34¼	AJ, MPZamore, SSU, ODM	First 4 staff gauges installed by FWD & SSU
19 Dec 97	4¾	39	AJ, MPZ, SSU, ODM	No smell; Layou flow heavy on 16 Dec
23 Dec 97	6	40¼	AJ, CJ	
30 Dec 97	7¾	42	AJ, MPZ, SSU, ODM psnl	First attempt to measure Matthieu depth - MZ
04 Jan 98	11¾	46	AJ, DARC psnl	Heavy rains on New Years + today. Layou high
05 Jan 98	12	46¼	PMatthew, RCharles	
08 Jan 98	13	47¼	MPZ, SSU, Fire, ODM	
09 Jan 98	14¼	48½	AJ, MPZ (+SSU & ODP)	Lake depth measured from dinghy by MPZ, AJ
12 Jan 98	15¾	50	AJ, CJ, TW	
13 Jan 98	16	50¼	MMaximea, RCharles	
17 Jan 98	17½	51¾	??	
24 Jan 98	15¼	49½	AJ and others	Drop of 2¼ ft from previous.
26 Jan 98	15	49¼	AJ and others	Level fluctuating cyclically; further drop
27 Jan 98	14¾	49	RonCharles, AGallion, AJ	No fluctuation; visited at 5:25 pm
29 Jan 98	14½	48¾	NR	No fluctuation
30 Jan 98	14½	48¾	Laville/SSU + KAlie, RWinston	
02 Feb 98	14	48¼	AJ, PM	
04 Feb 98	13¾	48	LPascal, LPrevost, RC	
06 Feb 98	13½	47¾	NR	
08 Feb 98	13¼	47½	MZamore and others	
10 Feb 98	13	47¼	LPascal, SDurand	
11 Feb 98	12¾	47	Laville/SSU	
12 Feb 98	12½	46¾	AGallion, ALugay	
16 Feb 98	12¼	46½	MMaximea, RC	
18 Feb 98	12¼	46½	PM and others	
03 Apr 98	10	44¼	AJ & others	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
08 Apr 98	9½	43¾	PM and others	
13 Apr 98	10¼	44½	AJ, LP	
15 Apr 98	10½	44¾	Police Officers	
19 Apr 98	9¾	44		
22 Apr 98	9¼	43½		
27 Apr 98	9	43¼		
29 Apr 98	??	??		
01 May 98	8¾	43		
06 May 98	8½	42¾		
11 May 98	8¾	43		
15 May 98	8¼	42½		
22 May 98	7¾	42		
29 May 98	9¾	44		
01 Jun 98	10¼	44½	Police Officers	
03 Jun 98	10¾	45	FEugene & LuanaPrevost	
08 Jun 98	10¼	44½	AGallion & RanCharles	
12 Jun 98	10	44¼	Police Officers	
17 Jun 98	10¾	45	AJames, PMatthew & GJulien	
22 Jun 98	12	46¼	KAlie & LPrevost	
26 Jun 98	12	46¼	PMatthew &	
01 Jul 98	12	46¼	AJames & RanCharles	Heavy rains over weekend
06 Jul 98	13¾	48	PMatthew, FEugene	TWave on 3Jul. Water may have reached 14ft
10 Jul 98	13¼	47½	AJames, CC	
15 Jul 98	12½	46¾	AJames, FEugene	
17 Jul 98	12¾	47	AJ and others	
21 Jul 98	17¼	51½	CJohn, NLewis	Tropical Wave yesterday
24 Jul 98	19¼	53½	AGallion & FEugene	Heavy rains
26 Jul 98	19¼	53½	AJames, DBlanchard	
27 Jul 98	19	53¼	AJames & HenryWerner	Gauge No. 3 adjusted by few inches

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
29 Jul 98	18½	52¾	Ron Charles & Randy Charles	
07 Aug 98	16¾	51	AJames, FEugene	
12 Aug 98	20½	54¾	AGallion & RCharles	
13 Aug 98	20¼	54½	AJames & RWinston	
14 Aug 98	19¾	54	Police Officers	
17 Aug 98	20¼	54½	SDurand & MMaximea	
21 Aug 98	20¼	54½	AJames & RWinston	
23 Aug 98	19¾	54	AJames & MJolly	
26 Aug 98	22½	56¾	AGallion & RWinston	
30 Aug 98	21¾	56	AJames & MJolly	Water level showing slight cyclical fluctuation
31 Aug 98	21½	55¾	RCharles & FEugene	
02 Sep 98	22½	56¾	AJames & FEugene	Thunder showers on Tuesday pm. No fluctua
04 Sep 98	22¾	57	AJames & BJno.Baptiste	
06 Sep 98	22½	56¾	AJames & JLaquerre	
09 Sep 98	23¼	57½	AJames & AGallion	Heavy rains last night
11 Sep 98	23	57¼	Police Officers	
13 Sep 98	23½	57¾	AJames & MJolly	Water fluctuating; Layou dam photographed
18 Sep 98	22½	56¾	MaMaximea & FEugene	
21 Sep 98	23	57¼	FEugene & RanCharles	Hurricane Georges
23 Sep 98	22¾	57	PMatthew, PRolle, RanC, FEug	
28 Sep 98	22½	56¾	NR	
30 Sep 98	23	57¼	Police Officers	
02 Oct 98	26	60¼	CJohn & MMaximea	
04 Oct 98	26¼	60½	AJames & MJolly	
05 Oct 98	26½	60¾	Police Officers	
07 Oct 98	26¾	61	PMatthew & FEugene	
09 Oct 98	27	61¼	Police Officers	
11 Oct 98	26½	60¾	AJames & MJolly	
12 Oct 98	26¼	60½	AGallion & RWinston	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
14 Oct 98	29 ³ / ₄	64	Police Officers	
16 Oct 98	29 ¹ / ₂	63 ³ / ₄	AJames, CJohn, JD	Gauge No. 4 adjusted
20 Oct 98	31	65 ¹ / ₄	Police Officers	Tropical Wave
21 Oct 98	33 ¹ / ₂	67 ³ / ₄	PMatthew & MMaximea	Tropical Wave
23 Oct 98	35 ¹ / ₂	69 ³ / ₄	Police Officers	
26 Oct 98	34 ¹ / ₂	68 ³ / ₄	RWinston & MMaximea	
30 Oct 98	33	67 ¹ / ₄	AJames & FEugene	
04 Nov 98	31	65 ¹ / ₄	PMatthew & Friends	
09 Nov 98	29 ¹ / ₂	63 ³ / ₄	AJames & MG	
13 Nov 98	29 ¹ / ₄	63 ¹ / ₂	AJames & FEugene	
17 Nov 98	29	63 ¹ / ₄	Police Officers	
18 Nov 98	29	63 ¹ / ₄	AGallion & RWinston	
20 Nov 98	29 ¹ / ₄	63 ¹ / ₂	Police Officers	
23 Nov 98	30	64 ¹ / ₄	AJames & RanCharles	
27 Nov 98	32 ¹ / ₄	66 ¹ / ₂	AJames & RanCharles	
30 Nov 98	32 ¹ / ₂	66 ³ / ₄	Police Officers	
02 Dec 98	32 ³ / ₄	67	SDurand, PMatthew, FEugene	
04 Dec 98	32 ¹ / ₂	66 ³ / ₄	Police Officers	
07 Dec 98	36 ³ / ₄	71	AJames & RWinston	
09 Dec 98	37 ¹ / ₂	71 ³ / ₄	Police Officers	
11 Dec 98	37 ¹ / ₄	71 ¹ / ₂	PMatthew & FEugene	
18 Dec 98	37 ³ / ₄	72	Police Officers	
21 Dec 98	40	74 ¹ / ₄	RWinston & FEugene	Water fluctuating
27 Dec 98	43	77 ¹ / ₄	AJames & MJolly	New gauge installed. Fluctuating water level
28 Dec 98	43 ¹ / ₂	77 ³ / ₄	Police Officers	
30 Dec 98	44³/₄	79	AJames, PMatthew, FEugene	
04 Jan 99	43 ¹ / ₄	77 ¹ / ₂	AJames & SDurand	(St. Joseph land slumping)
08 Jan 99	42 ¹ / ₄	76 ¹ / ₂	FEugene, EMadir	Water level fluctuating
13 Jan 99	41 ³ / ₄	76	MMaximea & RWinston	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
18 Jan 99	42½	76¾	AJames & CJohn	
27 Jan 99	42½	76¾	FEugene & BryRolle	
31 Jan 99	41½	75¾	AJames & MJolly	Avge. drop rate of ¼ft /day over last 4 days
05 Feb 99	40¾	75	AJames & AGallion	
10 Feb 99	39½	73¾	PMatthew & FEugene	Avge. drop rate of ¼ft /day over last 5 days
24 Feb 99	37¼	71½	AJames & AGallion	
01 Mar 99	36¾	71	AJames & FEugene	
03 Mar 99	36¾	71	AJames	
05 Mar 99	36½	70¾	CJohn & FEugene	
10 Mar 99	36	70¼	AGallion & PMatthew	
15 Mar 99	35¾	70	AJames & FEugene	
19 Mar 99	35¼	69½	CJohn & PMatthew	
24 Mar 99	34¾	69	AJames & AGallion	
29 Mar 99	34¼	68½	AJames, PMatthew & FEugene	
03 Apr 99	34	68¼	AJames & MJolly	
08 Apr 99	33¾	68	AJames & BTyson	Freak weather system affects north today
15 Apr 99	34¾	69	AJames & BRolle	
22 Apr 99	34¾	69	AG, FE, CL, ABeaupierre	
29 Apr 99	35¾	70	AJ, FE	
06 May 99	35	69¼	CJ, PM, FE	
11 May 99	34½	68¾	AG, AJ, BT	
13 May 99	34½	68¾	Police Officers	
20 May 99	33¾	68	AJ, CJ, AB	
28 May 99	33¾	68	AJ, AB, BT	
31 May 99	33½	67¾	Police Officers	
03 Jun 99	33¼	67½	AJ, BT and AB	
07 Jun 99	33	67¼	PM, FE RanC	
17 Jun 99	34½	68¾	AJ, AB, CL	
29 Jun 99	37½	71¾	AJ, AB	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
01 Jul 99	37 ³ / ₄	72	FE, BT	Layou Gauge reading (LGR) – 30ft 6 in
05 Jul 99	37 ³ / ₄	72	PM, FE	LGR – 30½ ft
10 Jul 99	39½	73 ³ / ₄	AJ	LGR – 30ft 8in
15 Jul 99	39 ³ / ₄	74	FE, BT, LJ	
19 Jul 99	40¼	74½	AJ, CJ	LRG = 30ft 8½in
29 Jul 99	40 ³ / ₄	75	AG, AB, MG	
08 Aug 99	41¼	75½	AJ	LRG = 30ft 9”
12 Aug 99	41	75 ³ / ₄	FE, LJ	LRG = 30ft 8”
16 Aug 99	41	75 ³ / ₄	MM, BT	LRG = 31ft
21 Aug 99	41¼	75½	AJ, LBruno, ST	LRG = 31ft
26 Aug 99	40 ³ / ₄	75	AG, AB, SD	
30 Aug 99	42	76¼	RW, AB	LRG = 30¾ ft
04 Sep 99	42	76¼	AJ, LBruno	
09 Sep 99	41	75¼	RW, FE	LRG = 30ft 6in
13 Sep 99	41½	75 ³ / ₄	AJ, MM, AB	LRG = 30ft 10in
20 Sep 99	40½	74 ³ / ₄	Police Officers	
23 Sep 99	40	74¼	RW, MM	
27 Sep 99	41	75¼	AG, MM	LRG = 31ft 3in
04 Oct 99	43	77¼	Police Officers	
07 Oct 99	42 ³ / ₄	77	AG, AB	
16 Oct 99	41	75¼	AJ, LB	LRG = 30ft 6in
21 Oct 99	44	78¼	FE, BT	LRG = 32ft 10in
23 Oct 99	44	78¼	AJ, LB, ST	LRG = 30ft 10in
25 Oct 99	43½	77 ³ / ₄	MM, RW	LRG = 30ft 6in
30 Oct 99	43¼	77½	AJ, LB	Fluctuating level
01 Nov 99	43¼	77½	Police Officers	
08 Nov 99	44 ³ / ₄	79	PM, FE	
11 Nov 99	47	81¼	Police Officers	
12 Nov 99	49 ³ / ₄	84	FE, BT, BR	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
15 Nov 99	49 ³ / ₄	84	FE, AB	New gauge (#6) installed on Matthieu lake
18 Nov 99	49	83 ¹ / ₄	MM, AG	
20 Nov 99	57 ¹ / ₄	91 ¹ / ₂	AG, LB	H. Lenny on 19Nov'. Layou gauge suspended
22 Nov 99	57	91 ¹ / ₄	FE, AJ	
29 Nov 99	54	88 ¹ / ₄	Police Officers	
02 Dec 99	52 ³ / ₄	87	MM, AG	
06 Dec 99	51 ¹ / ₂	85 ³ / ₄	FE, PM, AB	
16 Dec 99	48 ¹ / ₂	82 ³ / ₄	AJ, EH, AB, CS	
21 Dec 99	47 ³ / ₄	82	SD, RW	
23 Dec 99	49 ¹ / ₂	83 ³ / ₄	Police Officers	
30 Dec 99	47	81¹/₄	AG, BT	
04 Jan 00	47	81 ¹ / ₄	PM, FE, RC	
06 Jan 00	50 ¹ / ₂	84 ³ / ₄	AJ, AG, AB, PM / Police Team	French Team (Univ. Antilles-Guianne) visit
14 Jan 00	53 ¹ / ₂	87 ³ / ₄	FE, EH	
18 Jan 00	53 ¹ / ₂	87 ³ / ₄	SD, MM	
21 Jan 00	52 ³ / ₄	87	Police Officers	
27 Jan 00	51 ¹ / ₄	85 ¹ / ₂	AJ, AB, BT	
04 Feb 00	48 ¹ / ₄	82 ¹ / ₂	Police Officers	
14 Feb 00	48	82 ¹ / ₄	AJ, FE, AB	
28 Feb 00	49	83 ¹ / ₄	AJ, AB	
02 Mar 00	48 ¹ / ₂	82 ³ / ₄	Police Officers	
13 Mar 00	49 ³ / ₄	84	SD & LB	
20 Mar 00	50	84 ¹ / ₄	Police Officers	
23 Mar 00	50 ¹ / ₄	84 ¹ / ₂	AJ, AB	
28 Mar 00	50	84 ¹ / ₄	PM, BE, JEmanuel, RC	
07 Apr 00	49	83 ¹ / ₄	Police Officers	
12 Apr 00	48 ³ / ₄	83	AJ, AB, FE	
28 Apr 00	46 ³ / ₄	81	AJ, AB	
02 May 00	47	81 ¹ / ₄	AJ, AB, FE	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
10 May 00	45 ³ / ₄	80	PM, FE, BT, RC	
19 May 00	44 ¹ / ₄	78 ¹ / ₂	FE, BT	
29 May 00	44 ¹ / ₄	78 ¹ / ₂	AJ, RC	
07 Jun 00	44 ³ / ₄	79	FE, BT	
16 Jun 00	43 ³ / ₄	78	AJ, AB, PM	Gould & Huxley visited by GIS, ODM officials
26 Jun 00	42 ³ / ₄	77	AJ, AG, AB	Lowest level to date for 2000
05 Jul 00	43	77 ¹ / ₄	FE, BT	
14 Jul 00	43	77 ¹ / ₄	AJ, FE	
24 Jul 00	43	77 ¹ / ₄	PM, RanC, WW	
31 Jul 00	45 ³ / ₄	80	AJ, AB, Students	
12 Aug 00	48 ³ / ₄	83	AJ (solo)	
17 Aug 00	48 ¹ / ₂	82 ³ / ₄	AJ, AB	
23 Aug 00	49 ¹ / ₂	83 ³ / ₄	MM, AB, BT	
29 Aug 00	51 ¹ / ₄	85 ¹ / ₂	AG, LB	
06 Sep 00	51	85 ¹ / ₄	AG, RanC	
16 Sep 00	50 ³ / ₄	85	AJ, ST	
23 Sep 00	52	86 ¹ / ₄	AJ, ST	
28 Sep 00	51 ¹ / ₂	85 ³ / ₄	AG, BT	
04 Oct 00	51 ¹ / ₄	85 ¹ / ₂	FE, RC	
10 Oct 00	51 ¹ / ₂	85 ³ / ₄	PM, BT	
18 Oct 00	52 ¹ / ₄	86 ¹ / ₂	RW, MM, BT	
26 Oct 00	51 ¹ / ₄	85 ¹ / ₄	PM, MM, BT	
14 Nov 00	54 ³ / ₄	89	BT, AG	
17 Nov 00	54 ³ / ₄	89	BT, ACLugay	
20 Nov 00	54 ³ / ₄	89	PM, FE	
25 Nov 00	57 ¹ / ₄	91 ¹ / ₂	AJ, EDurand	Height reached in 1999 as a result of Lenny
30 Nov 00	57 ¹ / ₄	91 ¹ / ₂	AG, RanC, AB	Highest level reached to date: 25 & 30 Nov
06 Dec 00	56 ³ / ₄	91	AG, CJ, BT	
13 Dec 00	55 ¹ / ₄	89 ¹ / ₂	RW, MM	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
16 Dec 00	57 ¹ / ₄	91 ¹ / ₂	AJ, ED	Water fluctuating in levels by 1/2 inch
21 Dec 00	59 ¹ / ₄	93 ¹ / ₂	AJ, AB, AL	Highest level observed to date
29 Dec 00	58³/₄	93	PM, AB, BT	
05 Jan 01	57 ¹ / ₂	91 ³ / ₄	NR	
13 Jan 01	55 ³ / ₄	90	AJ, ADeJean	
18 Jan 01	55	89 ¹ / ₄	CJ, FE	
31 Jan 01	53 ¹ / ₄	87 ¹ / ₂	AJ, BT, ST	
10 Feb 01	54	88 ¹ / ₄	AJ, ST	
17 Feb 01	54 ³ / ₄	89	AJ, ADJ	
23 Feb 01	54 ¹ / ₄	88 ¹ / ₂	AF, FE, ST	
08 Mar 01	52 ¹ / ₄	86 ¹ / ₂	JEmanuel, FE, ST	
17 Mar 01	51 ¹ / ₂	85 ³ / ₄	AJ, ADJ	
24 Mar 01	51	85 ¹ / ₄	AJ, ST	
31 Mar 01	49 ³ / ₄	84	AJ, ADJ	
10 Apr 01	48 ¹ / ₄	82 ¹ / ₂	AJ, PM, ST	
20 Apr 01	45 ³ / ₄	80	JE, FE	
30 Apr 01	45 ³ / ₄	80		
10 May 01	44 ¹ / ₄	78 ¹ / ₂		
22 May 01	42	76 ¹ / ₄	FE, RC, ST	
31 May 01	41	75 ¹ / ₄		
12 Jun 01	41	75 ¹ / ₄		
21 Jun 01	41	75 ¹ / ₄	FE, ST	
30 Jun 01	40 ³ / ₄	75		Lowest level for 2001. Very long Dry Season
10 Jul 01	41	75 ¹ / ₄		
20 Jul 01	41	75 ¹ / ₄		
31 Jul 01	47 ¹ / ₂	81 ³ / ₄		Trop. Wave passed at end of month
11 Aug 01	49	83 ¹ / ₄		
20 Aug 01	53	87 ¹ / ₄		
31 Aug 01	53 ¹ / ₂	87 ³ / ₄		

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
11 Sep 01	54½	88¾		
21 Sep 01	53¼	87½		
29 Sep 01	52	86¾		
11 Oct 01	56¼	90½		
15 Oct 01	59¼	93½		
30 Oct 01	62½	96¾		New record high
10 Nov 01	60½	94¾		
28 Nov 01	58¼	92½		
13 Dec 01	65	99¼		New record high
21 Dec 01	72	106¼E		Highest level ever recorded
31 Dec 01	71	105¼		Highest end-of-year level
12 Jan 02	69	103¼		
22 Jan 02	66	100¼		
29 Jan 02	65¾ E	100		Based on reading of 2/3/02 and drops in level
09 Feb 02	64¾	99		Drop of 1ft ½ in from previous
19 Feb 02	64	98		Drop of 10¾" from previous reading
02 Mar 02	62½	96¾	AJ, ADJ	Dived! Level 2ft 7in above staff gauge top
12 Mar 02	63	97¼	AJ, ST	
20 Mar 02	63½	97¾	AJ	
27 Mar 02	62	96¼	FE, ST, RC	Drop of 1ft 5½ in
10 Apr 02	63	97¼	AJ, ADJ	Small slide south of gauge site. Rise of 1ft
20 Apr 02	63¼	97½	AJ, ST	
29 Apr 02	65½	99¾	AJ, ST	
23 May 02	68¼	102½	AJ, ST	
31 May 02	66½	100¾	AJ, ST	
15 Jun 02	64½	98¾	AJ, ADJ	
29 Jun 02	64¼	98½	NR	
02 Jul 02	63¾	98	AJ, ST	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
10 Jul 02	62 ³ / ₄	97	AJ, ST	
22 Jul 02	62 ¹ / ₂	96 ³ / ₄		
27 Jul 02	64 ¹ / ₄	98 ¹ / ₂	AJ, ADJ	
30 Jul 02	64 ³ / ₄	99	AJ, ADJ, TD	
10 Aug 02	64 ¹ / ₂	98 ³ / ₄	AJ, ST	
20 Aug 02	66 ¹ / ₂	100 ³ / ₄	AJ, ST	
09 Sep 02	66	100 ¹ / ₄	AJ, ST	
18 Sep 02	67	101 ¹ / ₄	AJ, ST	
28 Sep 02	65 ³ / ₄	100	AJ, ADJ	
19 Oct 02	63	97 ¹ / ₄	AJ, ADJ	Rainy
31 Oct 02	66 ³ / ₄	101	AJ, ST	
12 Nov 02	65	99 ¹ / ₄	AJ, ST	
29 Nov 02	66 ¹ / ₂	100 ³ / ₄	AJ, ST	
11 Dec 02	66	100 ¹ / ₄	AJ, ST	
31 Dec 02	64¹/₂	98³/₄	AJ, ED	
11 Jan 03	63 ³ / ₄	98	AJ, ADJ	
12 Feb 03	60 ³ / ₄	95	AJ, ADJ	
11 Mar 03	58 ³ / ₄	93	AJ, ADJ	
21 Mar 03	57 ¹ / ₄	91 ¹ / ₂	AJ, ST	
31 Mar 03	55 ³ / ₄	90	AJ, ST	
10 Apr 03	57 ¹ / ₂	91 ³ / ₄	NR	
08 May 03	55	89 ¹ / ₄	AJ, ST	
30 May 03	53	87 ¹ / ₄	AJ, ST	
30 Jun 03	60	94 ¹ / ₄	AJ, ST	
23 Jul 03	63 ³ / ₄	98	FE, PM, AB	Sunny
31 Jul 03	65 ³ / ₄	100	AJ, BG, ST	
15 Aug 03	67 ¹ / ₂	101 ³ / ₄	AJ, ADJ	
29 Aug 03	70 ³ / ₄	105	AJ, ADJ	
16 Sep 03	67 ³ / ₄	102	AJ, ST	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
21 Oct 03	66¼	100½	PM, ST	
15 Dec 03	73	107¼	AJ, ADJ	Swam. Kouwès jenga swimming on water
31 Dec 03	71¾	106	AJ, ADJ	
15 Jan 04	70¾	105	AJ, ADJ, Paul Joseph	Measured max. level reached in '03 (Nov.)
31 Jan 04	68	102¼	AJ, ADJ	
14 Feb 04	69¼	103½	AJ, ST	
27 Feb 04	68¼	102½	NR	
15 Mar 04	68¼	102½	AJ, ST	
16 Apr 04	65¼	99½	AJ, ADJ	
30 Apr 04	63¼	97½	AJ, ST	
28 May 04	73¼	107½	AJ, ADJ	Swam
15 Jun 04	75¾	110	AJ, ADJ	Swam. Level reached 110' 7" recently
17 Jun 04	75½	109¾	AJ, ADJ, LBruno, BRolle	New gauge installed (on Bwa Riviere stump)
30 Jun 04	75¼	109½	PM, BJB, AD, PJ, RC	
16 Jul 04	82¾	117	AJ, CSfd (ODM), FPascal (Met)	Swam to get reading. (New gauge needed.)
30 Jul 04	88	122¼	AJ, ADJ, LB	New staff gauge installed (Coconut tree)
16 Aug 04	88½	122¾	AJ, LB, ADJ, BGuye	New gauge installed
30 Aug 04	85¾	120	AJ, ADJ	Drop of 2ft 8" from previous
15 Sep 04	87½	121¾	AJ, ADJ	
19 Oct 04	86½	120¾	AJ, ADJ	
15 Nov 04	90	124¼	AJ, ADJ	Reached 90'4"; new record high
22 Nov 04	97	131¼	AJ, PM	New record
23 Nov 04	97	131¼	PM, SD	
15 Dec 04	96¼	130½	AJ, ST	
31 Dec 04	95½	129¾	AJ, ADJ, MM	Highest end-of-year reading
17 Jan 05	103½	137¾	PM, RC, ADJ	New Record!!!
25 Jan 05	102¼	136½	AJ, ADJ, LB	New Gauge installed (near large boulder)
13 Feb 05	97¾	132	PM & others	
28 Feb 05	96¾	131	AJ, ADJ	

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
14 Mar 05	93¼	127½	AJ, ADJ	
26 Apr 05	83¼	117½	PM, JAndré, ADJ	Drop in levels of 10ft in 6 weeks
24 May 05	77½	111¾	JA, PJ, ADJ	
24 Jun 05	81	115¼	JA, PJ, ST	
19 Jul 05	80½	114¾	JA, ST, AC/Agriculture	
16 Aug 05	80¼	114½	JA, ST, NHarve, Wallister	
13 Sep 05	76¾	111	AJ, NH, WA	Previously flooded area colonized with plants
30 Sep 05	74¼	108½	AJ, ChSfd, PBreheny & Cousin	Scientifically explored Matthieu Lake on boat
14 Oct 05	73¼	107½	AJ, ST, NH, AB	
15 Nov 05	88	122¼	JAndré, BG, NH	
29 Nov 05	88¼	122½	JA, AH, BG	
15 Dec 05	87¼	121½	JA, BG	
30 Dec 05	85¼	119½	AJ, Meckeith George, NH, ST	
16 Jan 06	83¾	118	AJ, NH, ST	
24 Feb 06	84¾	119	AJ, JMorancie	
17 Mar 06	83½	117¾	AJ, ST	
13 Apr 06	80¼	114½	AJ, ST	
30 May 06	73¼	107½	AJ, ST	6ft 2in drop since previous observn.
16 Jun 06	73¼	107½	AJ, ST, Ancomo James	
30 Jun 06	87¼	121½	AJ, ST	14ft increase. Snake swimming near gauge.
21 Jul 06	89¼	123½	AJ, ST, Ancomo James	
14 Aug 06	93¼	127½	AJ, ST	Surpassed Dec 05 level
29 Aug 06	92½	126¾	AJ, NH, Ancomo James	
13 Sep 06	93	127¼	AG, NH, Ancomo James	
10 Oct 06	93½	127¾	AG, NH, Ancomo James	
31 Oct 06	95¼	129½	AJ (solo)	
30 Nov 06	92½	126¾	AJ, ST	
29 Dec 06	92½	126¾	AJ, ST	
15 Mar 07	88¼	122½	RC, RC, NH	Clear and sunny day

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
30 Apr 07	81 ³ / ₄	116	AJ, ST	
15 Jun 07	74	108 ¹ / ₄	AJ, ST	
29 Jun 07	72 ¹ / ₄	106 ¹ / ₂	AJ, NH, ST	Level may have reached lower
31 Jul 07	70 ¹ / ₄	104 ¹ / ₂	AJ, ST, NH, AncJams, JFirmin	Rainy
15 Aug 07	74 ¹ / ₂	108 ³ / ₄	AJ, ST, JFirmin	
21 Aug 07	87 ¹ / ₂	121 ³ / ₄	AJ, ST	H. Dean on 17Aug. 3 slides; >8ft increase.
12 Oct 07	90 ³ / ₄	125	AJ, BJB, MG	1 st visit since Trop. Wave on 10 Sept
01 Nov 07	91 ³ / ₄	126	AJ, ST	
?? Dec 07	89 ³ / ₄	124	AJ, ST	
31 Dec 07	92¹/₂	126³/₄	AJ, ST	
31 Jan 08	91	125 ¹ / ₄	AJ, C "Mally" George	
28 Feb 08	92	126 ¹ / ₄	AJ, BJB, Alphil Matthew	
06 Mar 08	92 ¹ / ₄	126 ¹ / ₂	AJ, DOWASCO Lab staff	Water samples collected for analysis
28 Mar 08	90 ¹ / ₄	124 ¹ / ₂	BJB, Miguel Sh/ford, KelFelix	Trail cleared
08 May 08	90 ³ / ₄	125	AJ, ED	
30 May 08	87 ³ / ₄	122	AJ & ??	
27 Jun 08	86	120 ¹ / ₄	AJ, AG	
16 Jul 08	86	120 ¹ / ₄	AG, MarvMax	
30 Jul 08	84 ¹ / ₂	118 ³ / ₄	AG, MarvMax	
15 Aug 08	86	120 ¹ / ₄	AJ, MarioRobin	Blue-green algal bloom first recorded
29 Aug 08	85 ¹ / ₂ E	119 ³ / ₄ E	BJB, KFelix	
01 Sep 08	85 ¹ / ₂	119 ³ / ₄	AJ, BJB	
30 Sep 08	89	123 ¹ / ₄	AJ, ST	
14 Oct 08	94 ¹ / ₄	128 ¹ / ₂	AJ, BJB, KF	Water samples collected for analysis/Dowasco
19 Nov 08	93 ³ / ₄	128	AJ, BJB, KF	
02 Dec 08	93 ¹ / ₂	127 ³ / ₄	AJ, BJB, KF	
31 Dec 08	95	129¹/₄	AJ, BJB	Water sample collected for analysis/Dowasco
30 Jan 09	98 ³ / ₄	133	AJ, MinchiBurton, ST	Swam. Tree stem with gauge broken
27 Feb 09	96 ³ / ₄	131	AJ, MigSfd, KF	Swam. Kann gwaté marked with flagging

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
03 Apr 09	91 ³ / ₄	126	AJ, MigSfd, KF	5ft drop in 5 weeks
30 Apr 09	90 ³ / ₄	125	AJ, Jason Timothy*	*DOMLEC official. Swam, Rainy
03 Jun 09	91 ¹ / ₂	125 ³ / ₄	AJ, ST	Gauge not found! Reading off Kann Gwaté
09 Jun 09	91 ³ / ₄	126	AJ, RanC, JaffiaSamuel*	New gauge (replacement). *D/ca State College
15 Jul 09	90 ³ / ₄	125	AJ, ST, FMaffie, CLawrence*	Algal bloom. *DSC
31 Jul 09	94 ³ / ₄	129	AJ, ST, EBurton (YouthDiv)	Kouwès bayolé.
14 Aug 09	94	128 ¹ / ₄	AJ, ST	
04 Sep 09	96	130 ¹ / ₄	AJ, ST	T.S. Erica on 2Sep09
30 Sep 09	93	127 ¹ / ₄	AJ, BJB	O/nite rain; BW Teal, Moorhen, BH hummer
30 Oct 09	89	123 ¹ / ₄	AJ, ST	
16 Nov 09	87 ³ / ₄	122	AJ, ST	
30 Nov 09	89 ¹ / ₄	123 ¹ / ₄	AJ, BJB	DOWASCO samples; algal bloom lighter
14 Dec 09	89 ¹ / ₂	123 ³ / ₄	AJ, BJB, NH	Algal bloom decreased. Belted & Ringed Kfishr
31 Dec 09	88¹/₂	122³/₄	AJ, ST, Felix StHilaire	Moorhens, algal bloom
29 Jan 10	86	120 ¹ / ₄	AJ, BJB, Therese Yarde	
26 Feb 10	82 ¹ / ₄	116 ¹ / ₂	AJ, ST	Algal bloom yellowish; MNI Ash Fall on 12Feb.
31 Mar 10	76 ³ / ₄	111	AJ, PJoseph, ED	H ₂ O samples; conical shells accum; No yellow
30 Apr 10	75	109 ¹ / ₄	ST, NH	Intense dry season ended!
31 May 10	76	110 ¹ / ₄	AJ, NH, ST	Water samples (Chemical + algae); algal bloom
16 Jun 10	73 ³ / ₄	108	AJ, ST, EMcIntyre/DSC	Lowest level observed for year
29 Jun 10	79 ¹ / ₄	113 ¹ / ₂	AJ, ST, EMcIntyre, RichiLaville	Large snake. Tree fell across trail past slide #1
15 Jul 10	83 ¹ / ₄	117 ¹ / ₂	AJ, RLaville	Signs of wild pigs. NO algae accumulation
31 Jul 10	89 ³ / ₄	124	AJ, ST	Trop Wave yesterday. Zanndoli kléwant swam
17 Aug 10	94	128 ¹ / ₄	AJ, BJB, PJ	Recent Tropical Wave. Water dark green
31 Aug 10	96 ³ / ₄	131	AJ, BJB, ST	Recent Trop Wave. Decrease in algal bloom
15 Sep 10	96 ¹ / ₂	130 ³ / ₄	AJ, BJB, PJ	Water samples collected. Accum. of algae
30 Sep 10	100	134 ¹ / ₄	AJ, BJB	Gauge NOT seen. Swam. Flagging used
14 Oct 10	102 ¹ / ₂	136 ³ / ₄	AJ, ST	Reading taken off flagging on small poles
28 Oct 10	100 ³ / ₄	135	AJ, ST	Big snake on trail. Reading taken off sticks

Observn. Date	Gauge Height (ft)	Water Depth (ft)	Observers	Remarks
12 Nov 10	103	137¼	AJ, ALugay, ST	Nearing previous all-time high. H. Tomas
02 Dec 10	105¼	139½	ACL, ST	Highest level recorded to date
14 Dec 10	103	137¼	AJ, TDeroche*, GLaville, JVital	Visit by FWPD, ODM* and SSU personnel
15 Dec 10	102¾	137	ACL, ST	
31 Dec 10	101¼	135½	ACL, BJB, ST	Highest end-of-year level
14 Jan 11	106E	140¼	BJB, MMaximea, ST	New record high. (4'8" higher); No algal bloom
16 Feb 11	107E	141¼E	AJ, BJB, Rykiel Cyrille	
28 Feb 11	105¼E	139½	AJ, RCyrille	Level drop by 1' 8" in 12 days
16 Mar 11	102¾	137	AJ, ST, Group from SUNY	Drop by 2' 5½". Plankton surveyed. No algae
31 Mar 11	100¼	134½	AS, ST	Level drop 2' 6½" in 15 days
15 Apr 11	97¾	132	AJ, ST. MachelSulton	Level drop 2' 7½" in 15 days. No gauge still
29 Apr 11	98¼	132½	AJ, ST, MS	Level rose by 6½". Gauge found floating.
16 May 11	100½	134¾	AJ, ST	Level rose by 2' 4½". Kouwès bayolé
31 May 11	100¾	135	AJ, ST	Level rose by 4"
17 Jun 11	103¼	137½	JAndré, MS, BJB, ST	Level rose by 2' 6"
15 Jul 11	108¼	142½	JAndré, MMaximea, MS, AJ	Level rose by 5ft.
27 Jul 11	---	---	---	*Matthieu plug collapses at ~ 11:45p.m. *Matthieu Disaster 2011. No fatalities. *Dam on Layou R breaches cerc. 7:30 pm
09 Aug 11	---	---	JA, BJB, PJoseph, MS, PJ	First post-disaster visit to gauging station
18 Aug 11	---	---	RonC, BJB, AJ	
22 Aug 11	---	---	AJ, Felix Eugene, RanCharles	
27 Sep 11	---	---	AJ, PMatthew, ABeaupierre	Also visited Gould

**ReconTrip made by FWPD (MPZ, AJ, RW), SSU, ODP, Dr Cassandra Rogers and Dr. Jerry deGraff to area in early December 1997, before erection of gauges. Also, trip made in early 1998 by Head of Community Development, DOWASCO official, Senior Meteorology Officer & AJ not recorded.*

NOTES TO OBSERVERS (1998)
MONITORING WATER LEVEL IN MATTHIEU DAM AND RIVER

1. The staff gauges are calibrated in ft (alternate colours) and $\frac{1}{4}$ ft. Record the water level as it appears on the staff gauge, to the nearest $\frac{1}{4}$ ft. (Subsequently new gauges were calibrated in inches). **Please be accurate in reading the gauge.** The information provided may be used in decision-making, regarding the possible evacuation of persons downstream.

2. The (first) four staff gauges are calibrated from 0-10ft, 10-20ft, 20-30ft, 30-40ft.

The gauges have been positioned so that the level at the top of one gauge is the same level as that on the bottom of the next highest gauge. For example, the level at the top of the 10-20ft gauge is the same as that at the bottom of the 20-30 ft gauge.

This system is being used in order to obtain continuity in the monitoring, even though one (or more) of the staff gauges becomes completely submerged.

3. Record any significant observations (e.g. heavy rains preceding reading of gauge) in the space provided. If space is insufficient, go down to the next row for the observations, but be sure to strike out the section of the row that was not used.

4. Please record the date in the DD/MM/YY format, e.g. 26/10/97.

5. You may use the 24-hour time system (e.g. 0830hrs for 8:30 in the morning), or 1625 for 4:25 pm. If you chose to use the 12-hr time system, be sure to record a.m. or p.m. as the case may be.

6. Please keep the data forms clean and dry. They are official records that could come in handy during and after the damming of the Matthieu.

7. Finally, **SAFETY FIRST** should be your watchwords in collecting the data in the field.

**SPECIAL INSTRUCTIONS TO
OFFICERS MONITORING MATTHIEU RIVER**
(from week of 22 February 1998)

Fellow Officers:

You may be aware that the 0ft-10ft and 10ft to 20ft staff gauges on the Matthieu River were not properly synchronized and levelled (at time of installation), resulting in the bottom of the 10ft – 20ft gauge being about $1\frac{3}{4}$ ft above the top of the 0-10ft gauge.

For the next one to two weeks, beginning from the week of Carnival, the water level on the Matthieu River is going to be between the two staff gauges. However, the monitoring must go on, more so after a small amount of flow was seen coming from the base of the plug at Gould on Saturday 21st and Sunday 22nd February.

For the period that the water level will be between the two gauges, the following procedure will have to be employed in order to have the water level recorded and “corrected”. This procedure will remain in effect until the top of the 0-10ft gauge on the Bwa Riviere tree.

Instruments required: (a) a level; (b) a measuring tape graduated in feet and inches, or a 2ft ruler; (c) a knife, cutlass or other sharp object for marking the bark of the tree; (d) your notebook and pen/pencil, of course

STEP 1: Using the level, extend an imaginary horizontal line from the bottom of the 10- 20ft gauge around to a point on the tree’s buttress that will be over the water. Mark that point (X) with a knife or other sharp object.

STEP 2: Using the ruler or measuring tape, measure the vertical distance from the marked point (X) on the buttress (i.e. the level of the bottom of the 10-20ft gauge) down to the surface of the water.

STEP 3: Record that distance to the nearest $\frac{1}{4}$ ft. In other words, if the distance of 6 inches, or $8\frac{1}{2}$ inches or 1ft 7 inches, it should be recorded as $\frac{1}{2}$ ft, or $1\frac{1}{2}$ ft accordingly.

STEP 4: This distance must then be **subtracted from $11\frac{1}{4}$ ft** to give the corrected reading for the water level. The $11\frac{1}{4}$ ft is the length of the first staff gauge plus the $1\frac{3}{4}$ ft difference in levels between the two staff gauges. If you are unable to make that calculation, simply record that distance in inches or feet and inches as the case may be and submit the observation to the office where it will be corrected and recorded. Remember, when the water level reaches 10ft or thereabout the reading must then be made off the 0-10ft staff gauge.

Prepared by Arlington James, Forest Officer, 22 February 1998



F. Eugene (L) and R. Charles stand next to 70-80ft gauge on Bwa Riviere stump, following emptying of Matthieu Lake on 27/07/11 and 28/07/11



Some of the staff gauges remained completely submerged for several years before Matthieu Lake emptied following collapse of landslide plug