



## Guyana Water Inc. Summary Table for Treatment Plant Compliance with WHO Parameters

Document Identifier: GWI-REC-Sumtab/2018/03

Date of Issue: March 2018

Lab Address: 255 Da Silva St., Newtown Kitty, Georgetown

Approved by: Water Qual. Dept.

March 2018

### Treatment Plant Compliance with WHO parameters

Treatment plants	Parameters								
	Regions	pH	Turbidity (NTU)	Iron (mg/l)	Aluminium (mg/l)	Apparent Colour (Hazens)	Chlorine residual (mg/l)	Tot. Coliform (colonies /100ml)	E. Coli (colonies /100ml)
<b>WHO guidelines</b>		6.5-8.5	<5	< 0.3	<0.2	Clear (e.g<100)	0.2-0.5	Low counts (e.g 0 - 60)	0
Bartica	7 Bartica	4.76	3.44	0.08	1.37	48	0.30	0	0
Lima	2 Esseq	7.34	3.91	0.35	NA	49	0.74	35	0
Fellowship	3 WCD	6.88	0.83	0.15	NA	40	0.00	1	0
Pouderoyen	3 WCD	6.94	0.68	0.18	NA	15	0.00	3	fluctuating
Vergenoegen	3 WCD	7.43	3.73	0.60	NA	25	0.20	15	fluctuating
Covent Garden	4 EBD	6.71	3.34	0.45	NA	45	-	21	fluctuating
Eccles	4 EBD	6.31	18.95	1.97	NA	178	-	0	0
Grove	4 EBD	6.62	7.33	1.24	NA	84	-	70	0
Better Hope	4 ECD	8.28	0.34	0.02	NA	23	0.20	69	0
Friendship	4 ECD	6.46	23.65	1.42	NA	188	-	1	0
Mon Repos	4 ECD	8.37	0.32	0.05	NA	32	0.20	1	0
Central	4 GT	7.59	1.11	1.13	NA	65	0.00	51	0
Shelter Belt	4 GT	4.45	4.66	0.33	2.27	93	0.70	3	0
Sophia	4 GT	7.94	0.26	0.05	NA	21	0.60	0	0
Amelia's Ward	10 Lin	5.44	2.84	0.69	NA	47	0.90	fluctuating	0
LPC	10 Lin	4.43	7.22	0.27	2.10	96	-	0	0
McKenzie	10 Lin	4.80	7.02	0.22	1.50	101	0.20	0	0
West Watooka	10 Lin	4.66	3.47	0.10	0.66	76	0.42	1	0
Wisroc	10 Lin	4.23	1.80	0.34	0.26	44	0.97	2	0
Cotton Tree	5 WCB	6.60	1.11	0.14	NA	24	0.28	10	0
New Amsterdam*	6 Berbice	6.24	-	0.08	NA	-	0.29	11	0
Port Mourant*	6 Berbice	6.59	-	0.07	NA	-	0.37	33	0
Queenstown*	6 Berbice	6.87	-	0.16	NA	-	0.18	95	0
No. 56*	6 Berbice	6.75	-	0.06	NA	-	0.74	38	0



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### Notes (March 2018):

#### ***Treatment Plants***

- 9 out of the 24 plants (i.e. 37.5%) are fully compliant with the WHO drinking water guidelines listed above. These plants are: Fellowship, Better Hope, Mon repos, Sophia, Cotton Tree, New Amsterdam, Port Mourant, Queenstown, No.56.
- The remaining 15 out of 24 plants (i.e. 63.5%) are experiencing issues with respect to meeting all of the parameters, especially iron.
- 10 plants (41.7%) are non-compliant with iron. A common issue consequent to the iron problems is the high turbidity in the final waters. These plants include: Lima, Vergenoegen, Covent Garden, Eccles, Grove, Friendship, Central Ruimveldt, Shelter Belt, Amelia's Ward and Wisroc. The Iron removal processes need to be optimized. Friendship requires iron removal processes.
- It is unusual for Wisroc to have high iron values and as such needs to be monitored closely.
- All of the plants on the East Bank of Demerara are failing in iron removal and also Covent Garden has significant disinfection issues. A visit was made to the plant and a disinfection system has been installed and the dosage is currently being optimized.
- All surface water plants are non-compliant with pH and Aluminium: pH optimization is needed, which also affects the Aluminium concentration.
- Five (5) plants did not submit any chlorine reading even when reminded to do so while taking samples. These are Fellowship, Pouderoyen, Eccles, Grove, L.P.C.
- Three (3) plants recorded zero chlorine residuals consistently for the Month of March: and Central.
- Three (3) plants have fluctuating microbial quality for the month of March. These plants include: Poueroyne, Vergenoegen and Covent Garden. Samples received in April show that the water quality is now free of microbial contamination. This is being looked at closely to ensure consistency. Disinfection system being installed at Covent Garden.
- Samples from New Amsterdam, Queenstown, No.56 and Port Mourant treatment plants were not submitted to the Central laboratory during this month due to transportation problems. However, the results were adopted from the mini lab in Berbice.

#### ***Pump stations with issues***

- Three wells require urgent attention as E.Coli was detected twice. These wells are: Free and Easy; Noitgedacht and Amsterdam all of Region 3.



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- The abovementioned wells also reflected extremely high turbidity and colour values. As such, immediate action is required to mitigate this situation. The Water Quality Department is in communication with Region 3 Management to solve this issue. Well shocking will be done.
- Westminster Well also recorded high turbidities (10.2 NTU) and consequently high colour (102 Hazens).
- A resample is being done for Bush Lot Pump Station.

### *Distributions with issues regarding aesthetic quality of water (extremely high turbidity and colour)*

#### **Region 3**

Free & Easy distribution  
Noitgedacht distribution  
Success distribution  
Lots 29 & 119 Belle Vue  
Lot 28 Nismes  
Lot 4137 Westminster  
Lot 18 Vergenoegen

#### **Region 4 EBD**

Lot 12 Eccles  
Lot 231 Eccles  
Lot 270 Eccles

#### **Region 4 GT**

East Ruimveldt Market

#### **Region 4 ECD**

Lot 29 Friendship  
Lot 92 Friendship

#### **Region 10 Linden**

Lot 18 Rainbow City  
Mackenzie Hospital

A visit will be made to these locations to determine what the issue may be at these points, and compared to the quality of water leaving the treatment plant.