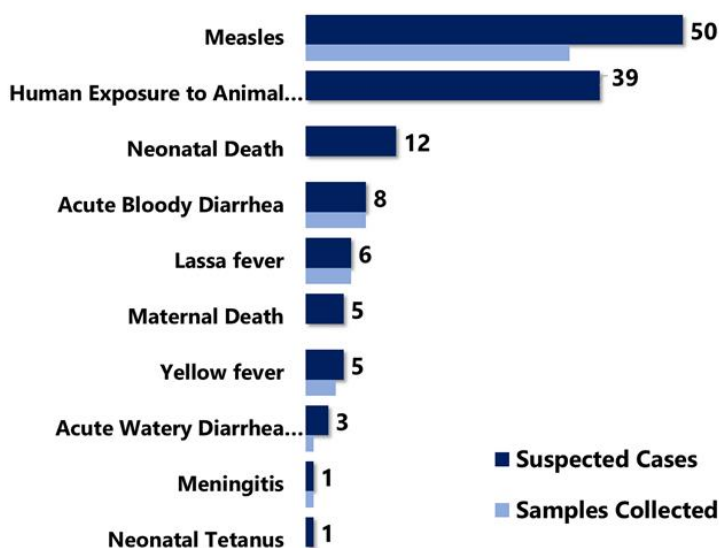


Country Population: 4,433,398 Volume 11, Issue14, April 1 –7, 2019 Data Source: CSOs from 15 Counties and Lab

## Highlights

Figure 1. Public Health Events Reported in Epi week 14



## Keynotes and Events of Public Health Significance

- A total of **130** events of public health importance including **18** deaths were reported
- **Completeness and timeliness** of health facility reports were **98%** and **97%** respectively
- **Ongoing suspected Measles outbreaks** in five counties
- **Ongoing Lassa fever outbreaks** in three counties

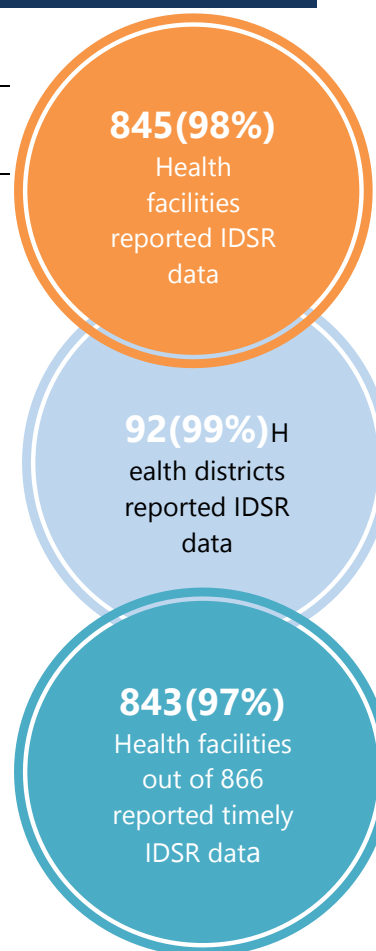
## Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 14, 2019

County	Number of Expected Report from Health Facility	Number of Reports Received	Number Received on Time	Completeness (%)	Timeliness (%)
Bomi	26	26	26	100	100
Bong	57	57	57	100	100
Gbarpolu	16	16	16	100	100
Grand Bassa	34	34	34	100	100
Grand Cape Mount	34	34	34	100	100
Grand Gedeh	24	24	24	100	100
Grand Kru	19	19	19	100	100
Lofa	59	59	59	100	100
Margibi	59	59	59	100	100
Maryland	26	26	26	100	100
Montserrado	351	330	328	94	93
Nimba	84	84	84	100	100
Rivercess	20	20	20	100	100
River Gee	20	20	20	100	100
Sinoe	37	37	37	100	100
<b>Liberia</b>	<b>866</b>	<b>845</b>	<b>843</b>	<b>98</b>	<b>97</b>

Legend: ≥80 <80

- The national target for weekly IDSR reporting is 80%
- All counties submitted weekly IDSR report on time to national level except Maryland County



## Vaccine Preventable Diseases

### Measles

- Fifty (50) suspected cases were reported from Lofa (13), River Gee (6), Montserrado (5), Grand Bassa (4), Margibi (4), Rivercess (4), Grand Kru (4), Gbarpolu (3), Grand Cape Mount (3), Bong (1), Grand Gedeh (1), Sinoe (1) and Sinoe (1) Counties
- Thirty-five (35) specimens were collected pending laboratory confirmation
- Sanoyea District, Bong County, Bokumu District, Gbarpolu County, Todee District, Montserrado County, Firestone District, Margibi County and Koluhun and Voinjama Districts County are currently in outbreak phase
- Vaccination status:
  - Among suspected cases: 33 (66%) vaccinated, 9 (18%) not vaccinated and 8 (16%) unknown
- Age distribution
  - Among suspected cases: <1 year: 2 (4%), 1 – 4 years: 13 (26%), ≥5 years: 35 (70%)
- Cumulatively, since Epi-week one, 714 suspected cases have been reported; Of these, 293 have been tested by the laboratory and results showed 65 positive, 222 tested negative and 6 indeterminate
- Epi-classification is as follows: 486 (68%) (65 lab confirmed, 352 clinically confirmed, 69 epi-linked), 222 (45.6%) negative and 6 (1.2%) indeterminate (See Table 2)
- Of the 222 specimen tested negative for Measles, 173 specimens were tested for Rubella; 83 tested positive, 90 negative and 10 indeterminate for Rubella

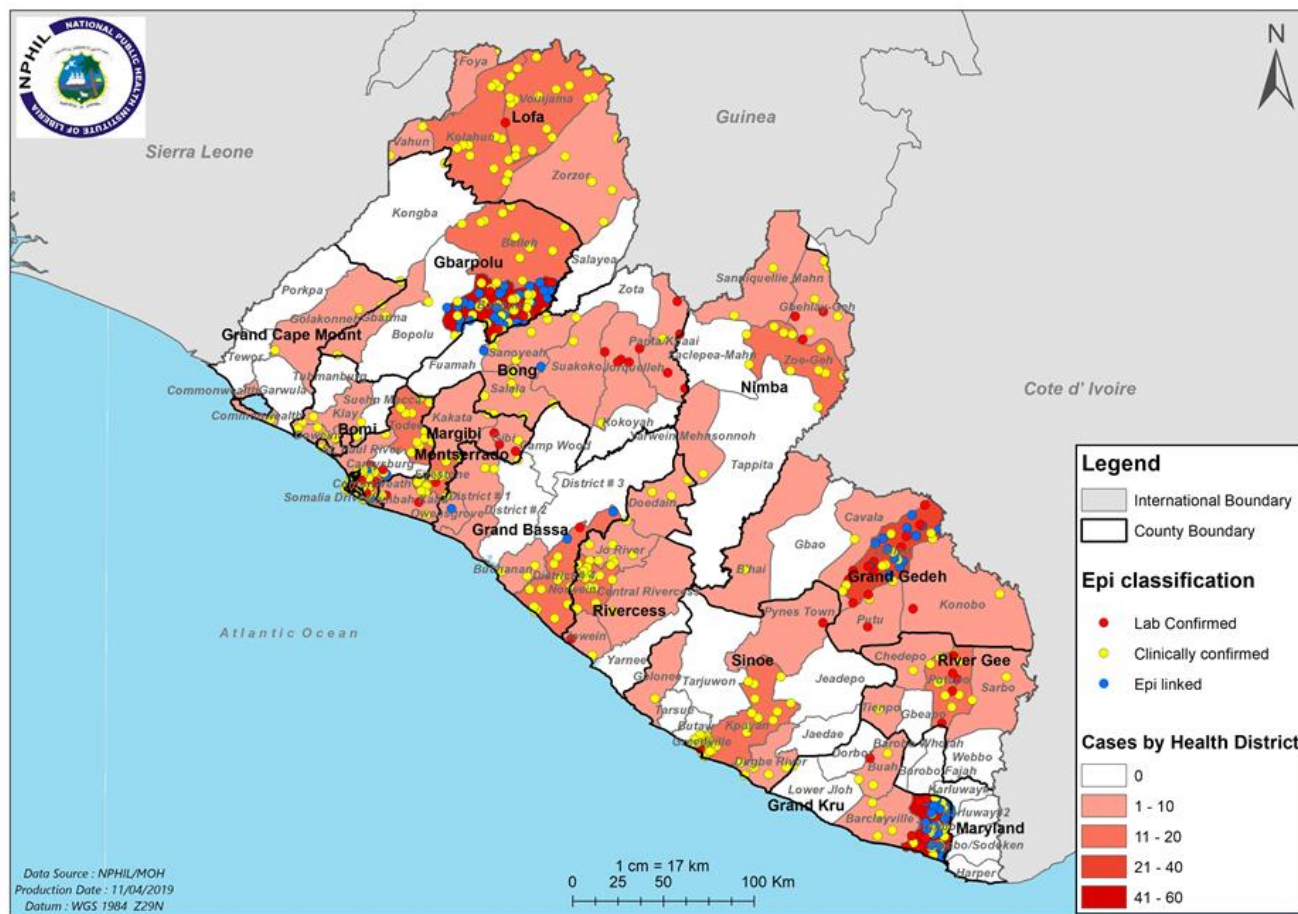
### Public Health Action

- Case Management, active case search, health education, and community engagement are ongoing in districts that reported

**Table 2. Cumulative Measles Cases Reported by County and Epi-classification, Liberia, Epi-week 1 - 14, 2019**

Reporting County	Epi-classification					Total	Annualized Non-Measles Febrile Rash Illness Rate
	Lab confirmed	Epi-linked	Clinically confirmed	Indeterminate (Equivocal)	Discarded (Negative)		
Bomi	0	0	8	0	4	12	15.1
Bong	9	2	14	1	11	37	10.1
Gbarpolu	4	27	41	0	5	77	19.1
Grand Bassa	2	2	15	1	15	35	21.5
Grand Cape Mount	0	0	1	0	8	9	20.0
Grand Gedeh	13	14	12	0	14	53	35.6
Grand Kru	8	20	19	0	9	56	49.5
Lofa	1	0	12	0	6	19	6.9
Margibi	6	0	18	1	20	45	30.3
Maryland	0	0	0	0	1	1	2.3
Montserrado	9	4	38	1	55	107	15.1
Nimba	3	0	19	1	27	50	18.6
River Gee	5	0	7	0	21	33	100.1
Rivercess	1	0	25	0	20	46	89.0
Sinoe	4	0	58	1	6	69	18.6
<b>Liberia</b>	<b>65</b>	<b>69</b>	<b>287</b>	<b>6</b>	<b>222</b>	<b>649</b>	<b>20.0</b>

Figure 2. Confirmed Measles Cases Reported by Health District, Liberia, Epi-week 1 - 14, 2019



### Acute Flaccid Paralysis (Suspected Polio)

- Zero case reported
- Cumulatively, since Epi week one, 18 cases have been recorded, 9 tested negative and 9 pending laboratory confirmation (See Table 3)

### Neonatal Tetanus

- One (1) case reported from Bong County
- Cumulatively, since Epi-week one, 10 clinically diagnosed cases have been recorded of which four were dead

### Viral Hemorrhagic Diseases

#### Ebola Virus Disease (EVD)

- Zero alert reported
- Cumulatively, since Epi-week one, 7 EVD alerts have been recorded with negative results

#### Lassa fever

- Six (6) suspected cases recorded from Nimba (3), Bong (2), and Grand Kru (1) Counties
  - Six specimens were collected
- Cumulatively, since Epi week one, 52 suspected cases have been recorded including six deaths
  - Of the total suspected cases, forty-six (46) have been tested by the laboratory. Epi-classification is as follows: 18 positive, 28 negatives



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## Yellow fever

- Five (5) suspected cases reported from Grand Kru (2), River Gee (2) and Nimba (1) Counties
  - Four specimens were collected and tested negative
- Cumulatively, since Epi-week one, 27 suspected cases have been reported and tested negative

## Monkeypox

- Zero suspected case reported
- Cumulatively, since Epi week one, 49 suspected cases have been reported and no specimen has been shipped

## Meningitis

- One (1) suspected case reported from Lofa County
  - Specimen was collected and tested negative
- Cumulatively, since Epi-week one, 14 suspected cases have been recorded, 13 tested negative, and one specimen not collected

## Events of Public Health Importance

### Maternal Mortality

- Five (5) deaths reported from Nimba (3), Montserrado (1) and Sinoe (1) Counties
- Reported causes are: postpartum hemorrhage (2), Eclampsia (1), Ruptured uterus (1), and Obstructed labor (1)
- All deaths were reported to have occurred in health facility
- Cumulatively, since Epi-week one, 57 maternal deaths have been recorded (*See Table 4*)

**Table 4. Annualized and Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 1 - 14, 2019**

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Grand Gedeh	6770	0	3	5	165
Maryland	7347	0	5	9	253
Margibi	11345	0	4	7	131
Rivercess	3865	0	1	2	96
Grand Bassa	11981	0	4	7	124
Gbarpolu	4507	0	1	2	82
Nimba	24970	3	11	19	164
Bong	18775	0	9	16	178
Montserrado	62479	1	13	23	77
Lofa	14911	0	1	2	25
Bomi	4546	0	1	2	82
Grand Cape Mount	6868	0	1	2	54
Grand Kru	3130	0	0	0	0
River Gee	3610	0	1	2	103
Sinoe	5534	1	2	4	134
<b>Liberia (National)</b>	<b>190636</b>	<b>5</b>	<b>57</b>	<b>100</b>	<b>111</b>

## Neonatal Mortality

- Twelve (12) deaths were reported from Margibi (4), Bong (3), Montserrado (2), Grand Kru (1), Lofa (1), and Rivercess (1) Counties
- Reported causes of deaths: Asphyxia (6), Preterm (3), Sepsis (2), and Neonatal tetanus (1)
- Ten (10) deaths were reported to have occurred in health facility while two occurred in community
- Cumulatively, since Epi-week one, 180 neonatal deaths have been reported (*See Table 5*)

**Table 5. Annualized and Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 1 - 14, 2019**

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Ratio/1,000
Grand Kru	3130	1	13	7	15.4
Montserrado	62479	2	83	46	4.9
Grand Gedeh	11345	4	16	9	5.2
Margibi	6770	0	13	7	7.1
Maryland	7347	0	6	3	3.0
Bong	18775	3	21	12	4.2
Lofa	14911	1	10	6	2.5
River Gee	3610	0	2	1	2.1
Bomi	4546	0	2	1	1.6
Gbarpolu	11981	0	2	1	0.6
Grand Bassa	6868	0	1	1	0.5
Grand Cape Mount	24970	0	5	3	0.7
Nimba	4507	0	1	1	0.8
Rivercess	3865	1	4	2	3.8
Sinoe	5534	0	1	1	0.7
<b>Liberia (National)</b>	<b>190636</b>	<b>12</b>	<b>180</b>	<b>100</b>	<b>3.5</b>

## Other Reportable Diseases

### Animal Bites (Human Exposure to Rabies)

- Thirty-nine (39) cases were reported from Nimba (9), Bong (9), Lofa (4), Maryland (4), Montserrado (3), Margibi (3), Grand Kru (2), Rivercess (1), Gbarpolu (1), Grand Cape Mount (1), Grand Gedeh (1), and Sinoe (1) Counties
- Cumulatively, since Epi-week one, 512 suspected cases of animal bites have been recorded

### Acute Bloody Diarrhea (Suspected Shigellosis)

- Eight (8) suspected cases were reported from Margibi (2), Maryland (2), Lofa (1), Nimba (1), River Gee (1), and Montserrado (1) Counties
  - Five specimens were collected, one tested negative, one positive (Gibi District, Margibi) and three pending
- Cumulatively, since Epi-week one, 73 acute bloody diarrhea cases have been recorded with 49 stool specimens collected; 30 tested; 6 positive, 25 not a case (negative), 3 pending and 39 suspected

### Severe Acute Watery Diarrhea (Cholera)

- Three (3) suspected cases reported from Nimba (3) County
  - Two specimens were collected
- Cumulatively, since Epi-week one, 34 suspected cases have been reported with 20 specimens collected; 18 tested negative and 2 pending testing

\*\*\*The two pending cases fall in week 12 and week 14

## Unexplained Cluster of Health Events

- Zero case reported
- Cumulatively, since Epi-week one, eleven cases of unexplained death has been reported

## Points of Entry

- Zero IDSR alert detected and verified
- A total of 5608 travelers were recorded for the week (See Table 6)

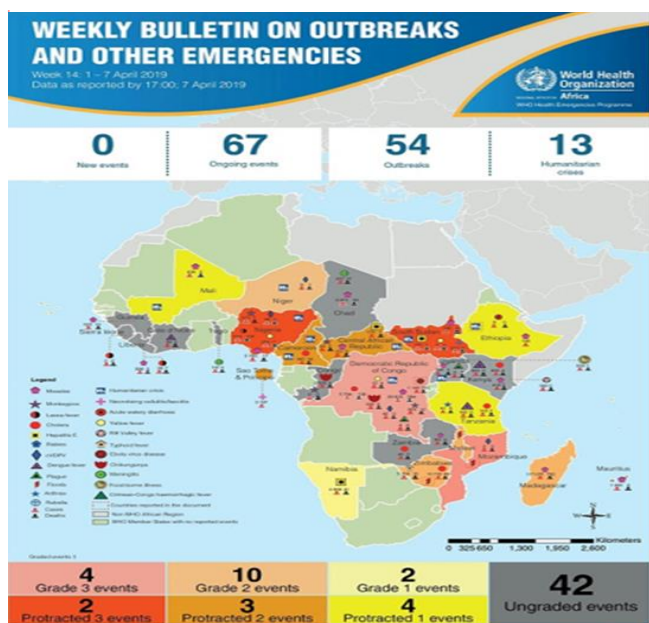
**Table 6. Total Travelers, IDSR Alerts Detected and Verified at Points of Entry, Liberia, Epi-week 14, 2019**

Type of Ports	Point of Entry	Weekly total	Arrival	Departure	Yellow Book Issued	Yellow Book Damage/Card Replaced	Travelers Vaccinated	IDSR Alerts	Alerts Verified
Airport	James S. Paynes	121	57	64	0	0	0	0	0
	Robert International Airport	3806	1750	2056	39	25	14	0	0
Seaport	Freeport of Monrovia	162	81	81	0	0	0	0	0
	Buchanan Port	102	51	51	0	0	0	0	0
Ground Crossing	Bo Water Side	528	186	342	36	8	28	0	0
	Ganta	449	213	236	27	27	0	0	0
	Yekepa	69	37	32	0	0	0	0	0
	Loguatuo	215	141	74	6	6	0	0	0
	Nursing Division	158	138	18	156	40	116	0	0
<b>Total Traveler for the Week</b>		<b>5608</b>	<b>2654</b>	<b>2954</b>	<b>264</b>	<b>106</b>	<b>158</b>	<b>0</b>	<b>0</b>

**Note: Yellow book issue for both arrival and departure; Vaccination coverage for both arrival and departure**

## AFRO Public Health Events

The National Public Health Institute of Liberia continues to monitor acute public health emergencies and outbreaks occurring in the African Region in order to ensure preparedness and preventive measures are implemented



During this week, 67 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- Cyclone Idai Southern Africa (Mozambique, Malawi and Zimbabwe)
- Ebola Virus Disease in Democratic Republic of the Congo
- Humanitarian in Cameroon
- Humanitarian crisis in Ethiopia



# Liberia IDSR Epidemiology Bulletin

2019 Epi-week 14 (April 1 – 7, 2019)



## Outbreaks: Measles

### Belleh and Bokomu Districts, Gbarpolu County:

- Six new cases reported
- Treated and discharge
- Vaccination coverage was 94% and 57% for Belleh and Bokumo Districts

### Todee District, Montserrado:

- Plan to conduct out reach to affected and surrounding communities target 6-59 months
- Treated and discharge

### Kolahun and Voinjama Districts, Lofa County

- Reported 15 suspected cases ( Kolahun 7 & Voinjama 8
- Cases treated and discharged
- CHT received 3,000 doses of measles vaccine and 1000 capsules of vitamin A (blue and red)

- Reported 11 suspected cases

### Sanoyea District, Bong County: Measles

- Reported 2 suspected cases
- Treated and discharge
- Vaccinated 42 children in five communities
- Community engagement and active case search ongoing
- CHT has financial gap to conduct the mini campaign

### Firestone, Margibi County

- Reported 9 suspected cases
- Treated and discharged
- Measles outreach is ongoing in affected and surrounding communities from April 4-5, 2019 target 6-59 months

## Public Health Measures

### National level

- Providing technical remote support to Counties
  - Heighten surveillance in affected and surrounding communities

### County level

- Case management for all reported cases ongoing
- Active case search ongoing in affected communities for Measles and Lassa fever



# Liberia IDSR Epidemiology Bulletin

2019 Epi-week 14 (April 1– 7, 2019)



## Notes

- *Completeness* refers to the proportion of expected weekly IDSR reports received (target:  $\geq 80\%$ )
- *Timeliness* refers to the proportion of expected weekly IDSR reports received by the next level on time (target:  $\geq 80\%$ ). Time requirement for weekly IDSR reports:
  - Health facility - required on or before 5:00pm every Saturday to the district level
  - Health district - required on or before 5:00pm every Sunday to the county level
  - County - required on or before 5:00pm every Monday to the national level
- *Non-polio AFP rate* is the proportion of non-polio AFP cases per 100,000 among the estimated population under 15 years of age in 2017 (annual target:  $\geq 2/100,000$ )
- *Non-measles febrile rash illness rate* refers to the proportion of Negative measles cases per 100,000 population
- *Annualized maternal mortality rate* refers to the maternal mortality rate of a given period less than one year and it is the number of maternal deaths per 100,000 live births
- *Annualized neonatal mortality rate* refers to the neonatal mortality ratio of a given period less than one year and it is the number of neonatal deaths per 1,000 live births
- *Epi-linked* refers to any suspected case that has not had a specimen taken for serologic confirmation but is linked to a laboratory confirmed case
- *Confirmed case* refers to a case whose specimen has tested positive or reactive upon laboratory testing, or has been classified as confirmed by either epidemiologic linkage with a confirmed case, or clinical compatibility with the disease or condition
- *Case Fatality Rate (CFR)* is the proportion of deaths among confirmed cases



# Liberia IDSR Epidemiology Bulletin

2019 Epi-week 14(April 1– 7, 2019)

Counties	No. of Expected Health District		Acute Flaccid Paralysis (Suspected Polio)		Acute Bloody Diarrhoea (Shigellosis)		Severe Acute Watery Diarrhoea (Cholera)		Human Exposure to Animal bites (Suspected Rabies)		Lassa fever		Measles		Meningitis		Maternal Mortality		Neonatal Mortality		Neonatal Tetanus		Ebola Virus Disease		Yellow fever		Monkeypox		Dengue fever		Buruli Ulcer		MDR Tuberculosis		Yaws		Unexplained Cluster of deaths		Unexplained Cluster of Health Events/Disease		Other Diseases/Events	
	No. of Health District Reported		A	D	A	D	A	D	A	D	A	D	A	D	D	D	D	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D				
Bomi	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Bong	9	9	0	0	0	0	0	0	9	0	2	0	1	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Gbarpolu	5	5	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Grand Bassa	8	8	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Grand Cape Mount	5	5	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Grand Gedeh	6	6	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Grand Kru	5	5	0	0	0	0	0	0	2	0	1	0	4	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Lofa	6	6	0	0	1	0	0	0	4	0	0	0	13	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Margibi	4	3	0	0	2	0	0	0	3	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Maryland	8	8	0	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Montserrado	7	7	0	0	1	0	0	0	3	0	0	0	5	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Nimba	6	6	0	0	1	0	3	0	9	0	3	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Rivercess	6	6	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
River Gee	6	6	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Sinoe	10	10	0	0	0	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>Total Weekly</b>	<b>95</b>	<b>94</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>					

D = Dead  
A = Alive

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