Cryptosporidiosis Surveillance Project

First Quarterly Report

2014

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: First Quarter 2014:

During the first quarter of 2014, 23 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2013. No system–wide, drinking water associated cryptosporidiosis out-breaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January – March 2014

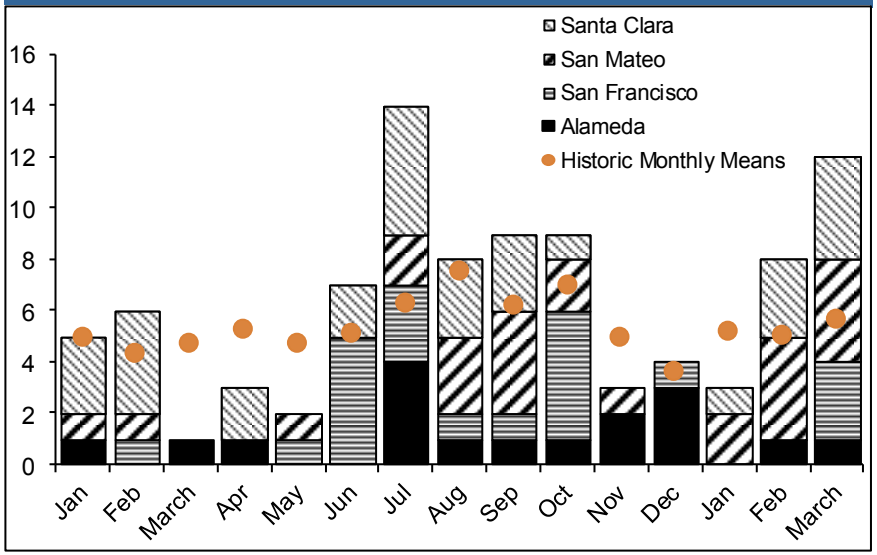
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	2	50%	0.13
San Francisco	3	100%	0.36
San Mateo	10	40%	1.34
Santa Clara	8	50%	0.43
Tuolumne	0	NA	NA
Total	23	52%	0.45

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2013 and 2014. Sacramento, California, May 2014.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2014.
- Figure 1: Monthly case totals by county for January 2013 through March 2014.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through March 2014.

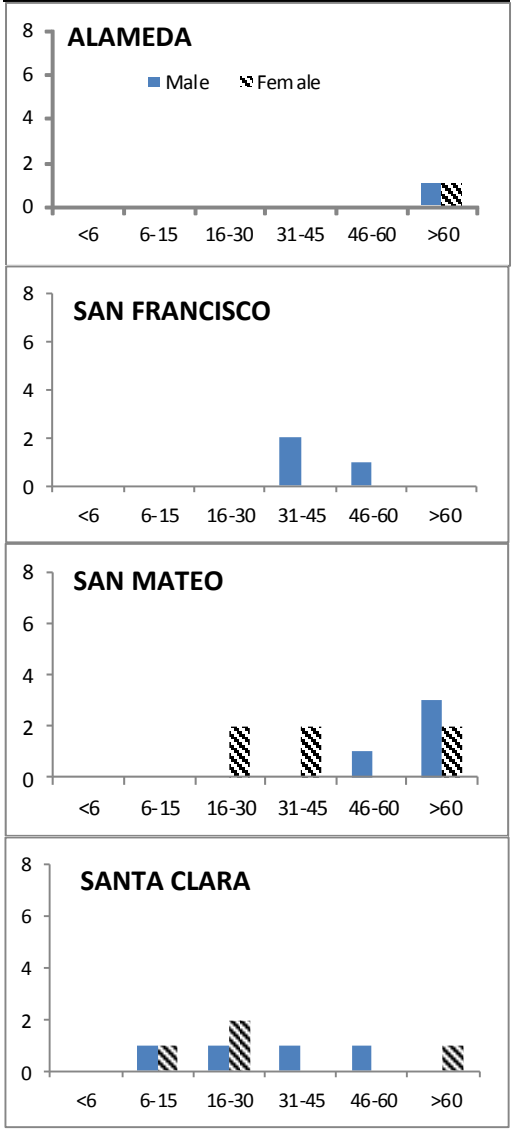
Figure 1: Cryptosporidiosis Cases by Month and County, January—March 2014



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2014



This report was created in May 2014 by the San Francisco Department of Public Health Environmental Health Section in partnership with the San Francisco Public Utilities Commission.
For more information, contact mina.mohammadi@sfdph.org or visit our website at http://www.sfhealthequity.org/elements/water
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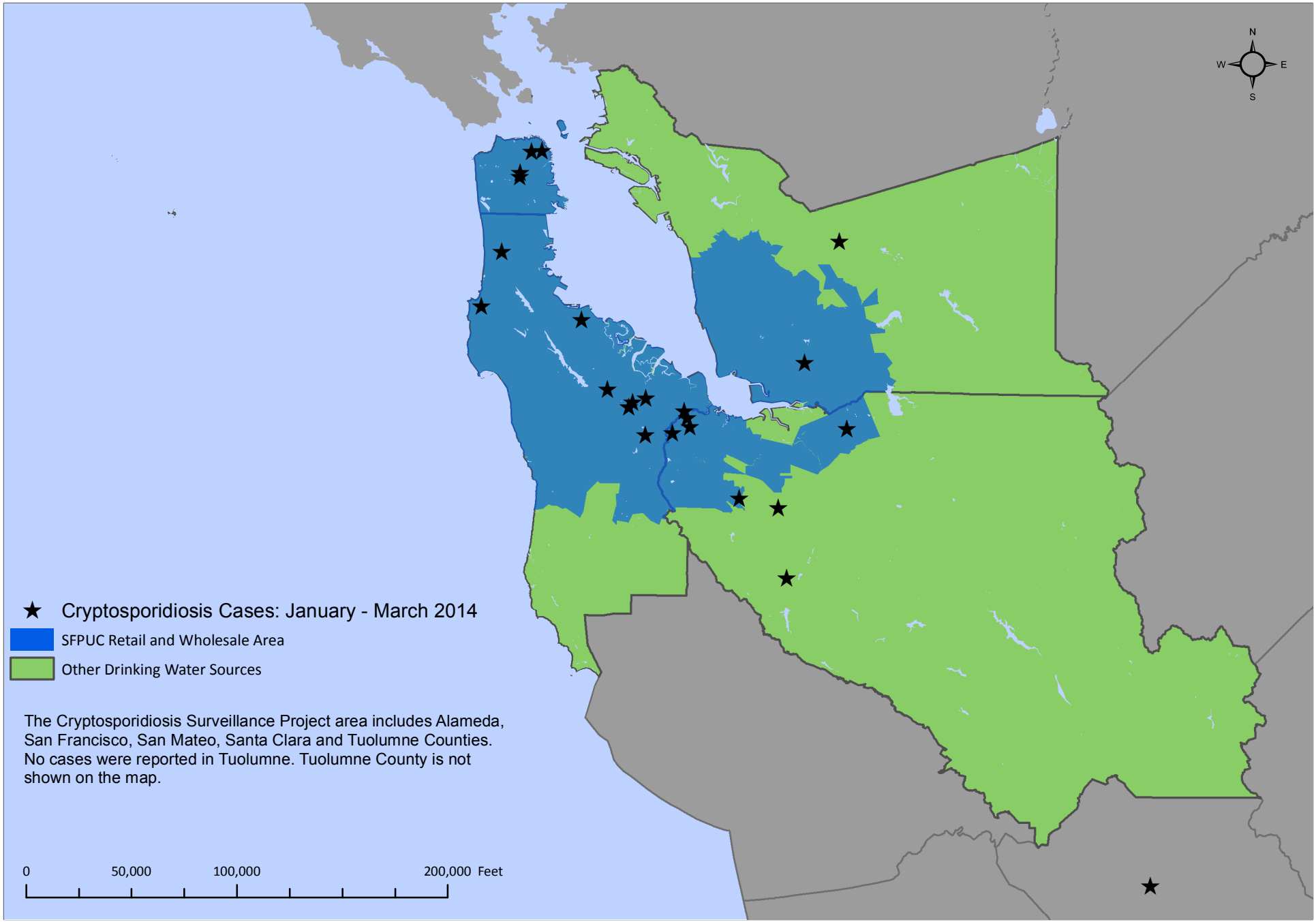
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, and Santa Clara Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Second Quarterly Report

2014

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Second Quarter 2014:

During the first and second quarter of 2014, 49 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2013. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January – March 2014

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	5	60%	0.32
San Francisco	8	100%	0.96
San Mateo	21	52%	2.82
Santa Clara	15	40%	0.80
Tuolumne	0	NA	NA
Total	49	57%	0.97

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2013 and 2014. Sacramento, California, May 2014.

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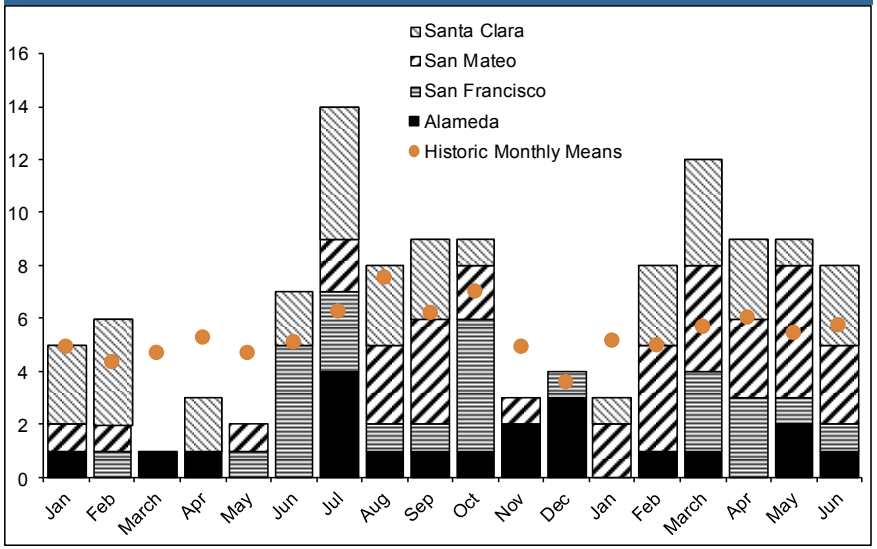

Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors.

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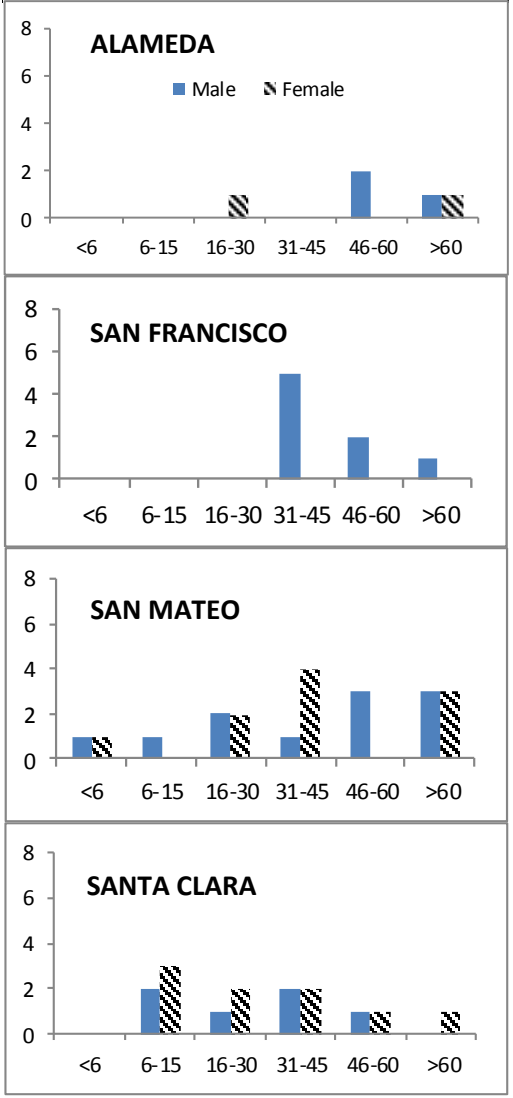
Figure 2: Case Counts by County, Age and Sex, January–June 2014



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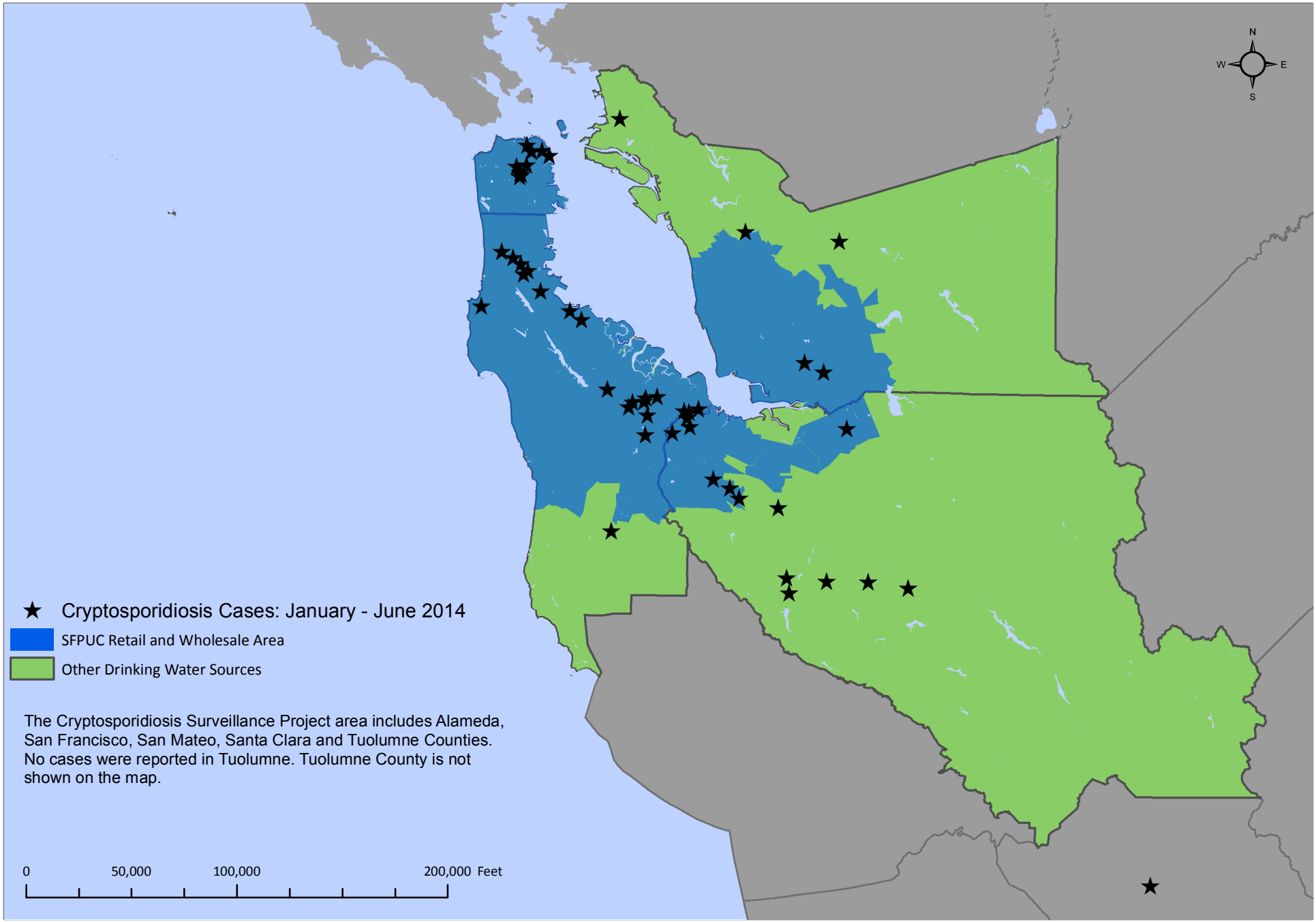

Cryptosporidiosis Surveillance Project

Third Quarterly Report

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Surveillance Summary: Third Quarter 2014:

During the first, second and third quarters of 2014, 68 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2013. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2013

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	8	63%	0.51
San Francisco	10	90%	1.20
San Mateo	29	41%	3.89
Santa Clara	21	38%	1.12
Tuolumne	0	NA	NA
Total	68	50%	1.34

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2013 and 2014. Sacramento, California, May 2014.

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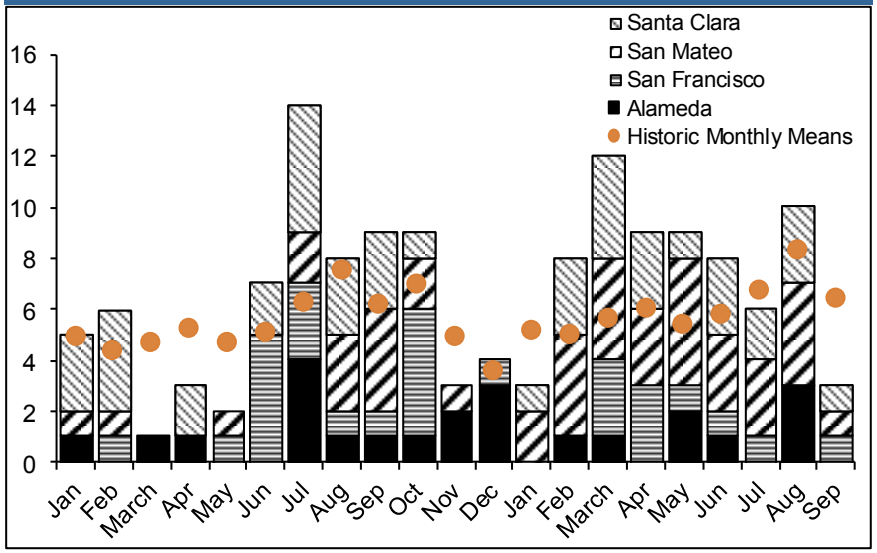
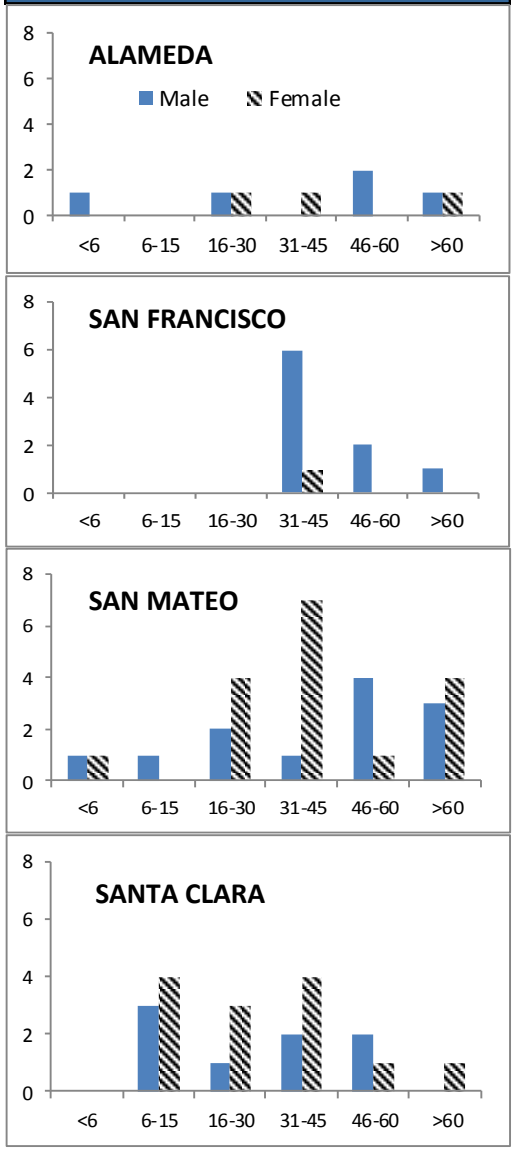


Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–September 2014



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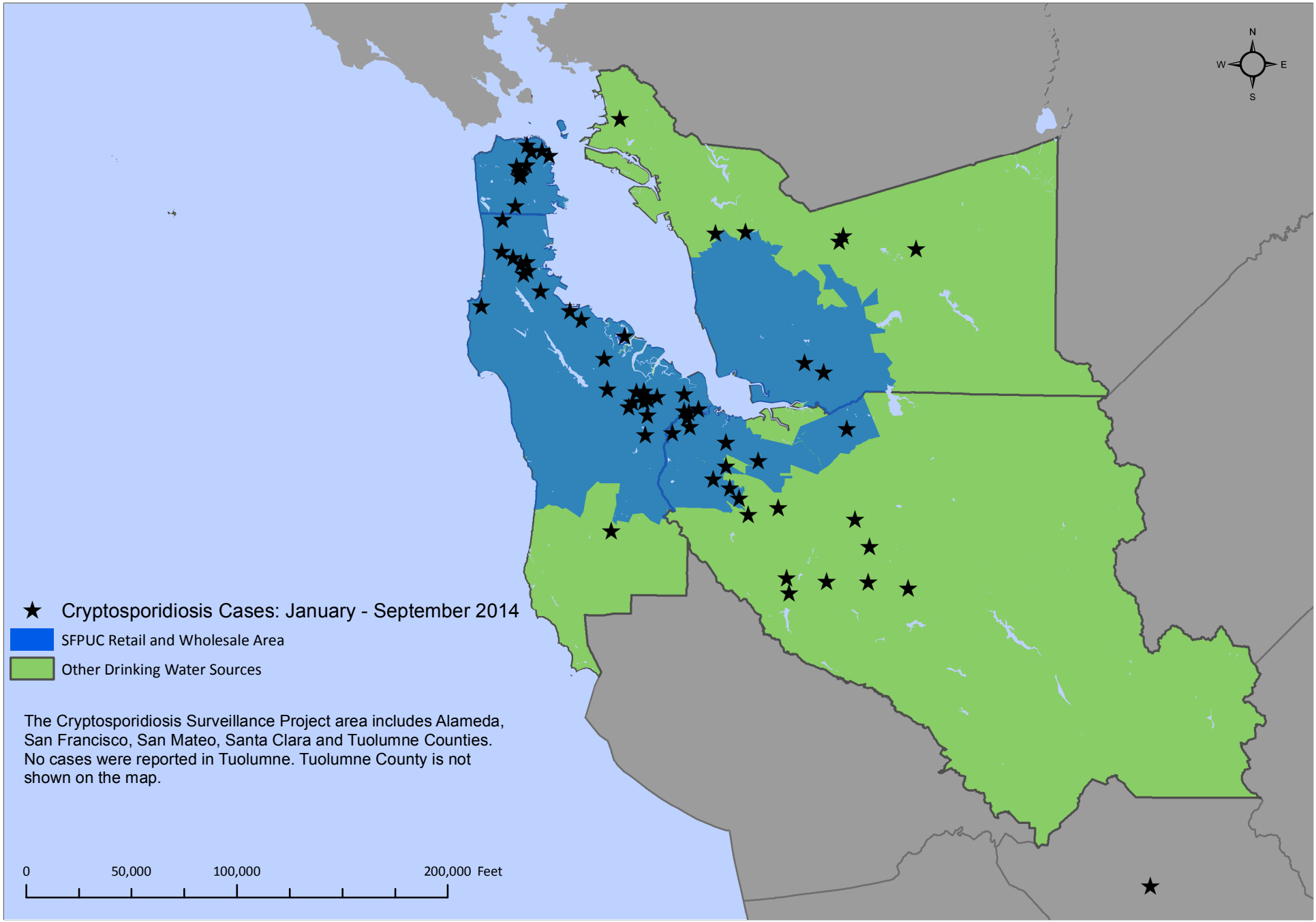


Cryptosporidiosis Surveillance Project Annual Report 2014

The Bay Area Cryptosporidiosis Surveillance Project (CSP) monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary

Fourth Quarter 2014: During the fourth quarter of 2014, 10 cases of cryptosporidiosis were reported in the project area. Fewer cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

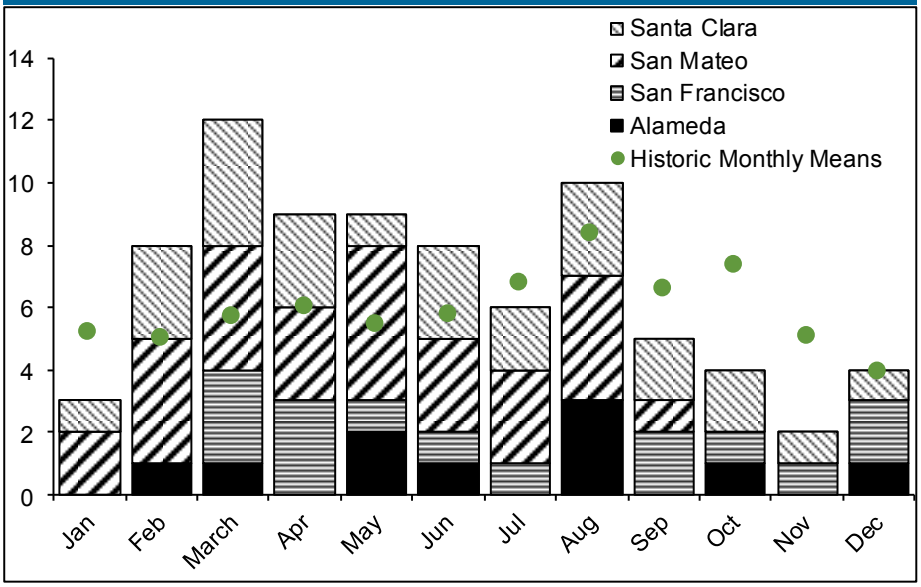
2014 Surveillance: In 2014 a total of 80 cases were reported. No system-wide, drinking water associated or other cryptosporidiosis outbreaks were detected. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 3.89 cryptosporidiosis cases per 100,000 residents in San Mateo County (Table 1). Compared to 2013, the incidence of cryptosporidiosis decreased for San Francisco and Alameda counties and increased for Santa Clara and San Mateo counties. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2014

County	N	Cumulative Incidence per 100,000‡
Alameda	10	0.64
San Francisco	15	1.79
San Mateo	29	3.89
Santa Clara	26	1.39
Tuolumne	0	NA
Total	80	1.58

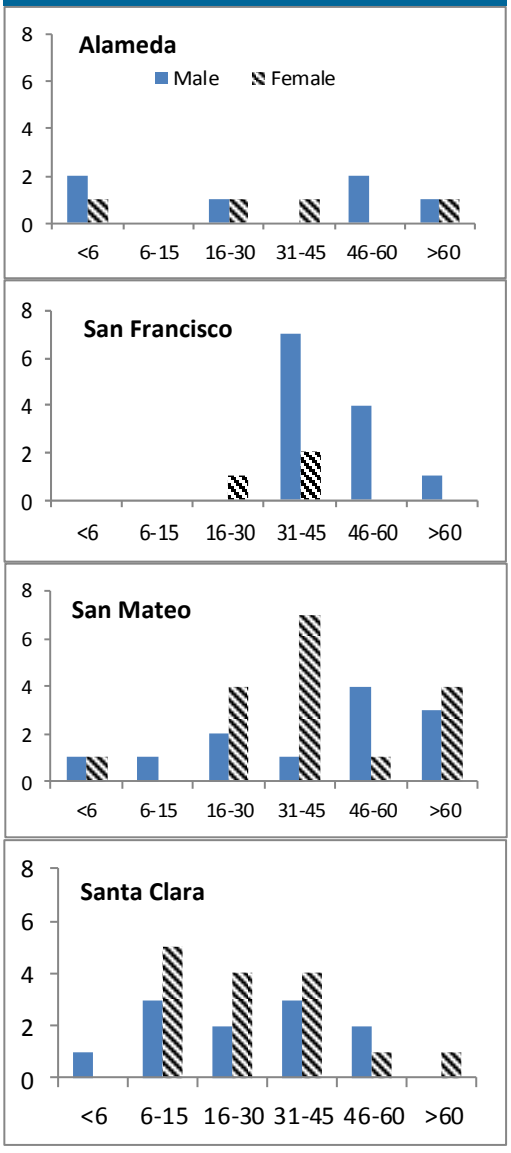
‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2013 and 2014. Sacramento, California, May 2014.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2014 - December 2014



No cases reported in Tuolumne County.
Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010-2011.
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–December 2014



Cryptosporidiosis Case Demographics and Risk Factors

In 2014, 33 (41%) of cryptosporidiosis cases were white and 41 (51%) were male. Data on race/ethnicity were not collected for 21 (26%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2014, 2 (3%) reported contact with a suspected case during the incubation period. Twenty-nine (36%) cases over age 15 reported sexual contact during the incubation period; eight adult male cases reported MSM activity. Eight (10%) cases reported compromised immune status. Twenty-seven (34%) cases reported contact with animals during the incubation period; four (5%) had contact with farm or non-domesticated animals. Twenty-eight (35%) cases reported foreign travel. Twenty-three (29%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2014

	N	(%) by County
Alameda		
Male	6	(60%)
White	5	(50%)
Black	1	(10%)
Asian	1	(10%)
Hispanic	3	(30%)
San Francisco		
Male	12	(80%)
White	8	(53%)
Black	1	(7%)
Asian	1	(7%)
Unknown/Missing	5	(33%)
San Mateo		
Male	12	(41%)
White	12	(41%)
Black	2	(7%)
Asian/Pacific	1	(3%)
Hispanic	5	(17%)
Pacific Islander	1	(3%)
Unknown/Missing	8	(28%)
Santa Clara		
Male	11	(42%)
White	8	(31%)
Black	1	(4%)
Asian	5	(19%)
Hispanic	4	(15%)
Unknown/Missing	8	(31%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2014

Risk Factor	County	(%)
Contact with Suspect Case	San Francisco	(7%)
	Santa Mateo	(3%)
Daycare	Alameda	(10%)
	San Mateo	(10%)
	Santa Clara	(4%)
Sexual Activity*	Alameda	(30%)
	San Francisco	(53%)
	San Mateo	(41%)
	Santa Clara	(23%)
MSM**	San Francisco	(27%)
	San Mateo	(7%)
	Santa Clara	(8%)
Contact with Farm or Non-Domesticated Animals	Alameda	(10%)
	Santa Mateo	(7%)
	Santa Clara	(4%)
Immune Suppression	Alameda	(10%)
	San Francisco	(20%)
	San Mateo	(7%)
	Santa Clara	(8%)
Foreign Travel	Alameda	(40%)
	San Francisco	(27%)
	San Mateo	(38%)
	Santa Clara	(35%)
Recreational Water Contact ***	Alameda	(40%)
	San Francisco	(40%)
	San Mateo	(21%)
	Santa Clara	(27%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2014, CSP received case notification of positive *Cryptosporidium* laboratory results for 74% of the 80 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 70% of cases in 2014. Interviews were completed within one business day of notification for 50% of all interviewed cases.

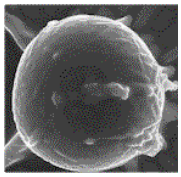


Table 4: Median Days between Specimen Collection and Report to CSP, 2014

		N	Median	Min	Max
2014		80	5	1	118
Quarter					
	Quarter 1	23	6	1	56
	Quarter 2	26	6	1	19
	Quarter 3	21	4	1	118
	Quarter 4	10	5	1	15
Informant					
	California Emerging Infections Program	21	7	4	118
	Clinical Diagnostic Laboratory	14	3	1	19
	County Health Department	42	5	1	26
County					
	Alameda	10	6	3	15
	San Francisco	15	7	1	118
	San Mateo	29	4	1	28
	Santa Clara	26	5	1	11

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2014

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	6	6	5	15
	Alameda County Public Health Department	4	6	3	11
	Quarter 1	2	8	6	10
	Quarter 2	3	6	6	7
	Quarter 3	3	5	3	11
	Quarter 4	2	10	5	15
San Francisco	California Emerging Infections Program	6	9	7	118
	Clinical Diagnostic Laboratory	6	4	1	19
	Quarter 1	3	11	7	56
	Quarter 2	5	7	1	19
	Quarter 3	3	7	1	118
	Quarter 4	4	4	2	4
San Mateo	California Emerging Infections Program	6	7	4	28
	Clinical Diagnostic Laboratory	7	3	1	5
	San Mateo County Health Services Agency	15	4	1	26
	Quarter 1	10	10	1	26
	Quarter 2	11	4	1	15
	Quarter 3	8	4	1	28
	Quarter 4	0	-	-	-
Santa Clara	California Emerging Infections Program	3	6	5	8
	Clinical Diagnostic Laboratory	1	2	2	2
	Santa Clara County Public Health Department	22	5	1	11
	Quarter 1	8	5	1	8
	Quarter 2	7	6	4	8
	Quarter 3	7	3	2	6
	Quarter 4	4	8	4	11

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Surveillance Summary: First Quarter 2015:

During the first quarter of 2015, 32 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2014. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–March 2015

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	2	50%	0.13
San Francisco	19	79%	2.27
San Mateo	6	67%	0.80
Santa Clara	5	60%	0.27
Tuolumne	0	NA	NA
Total	32	72%	0.63

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2014. Sacramento, California, December 2014.

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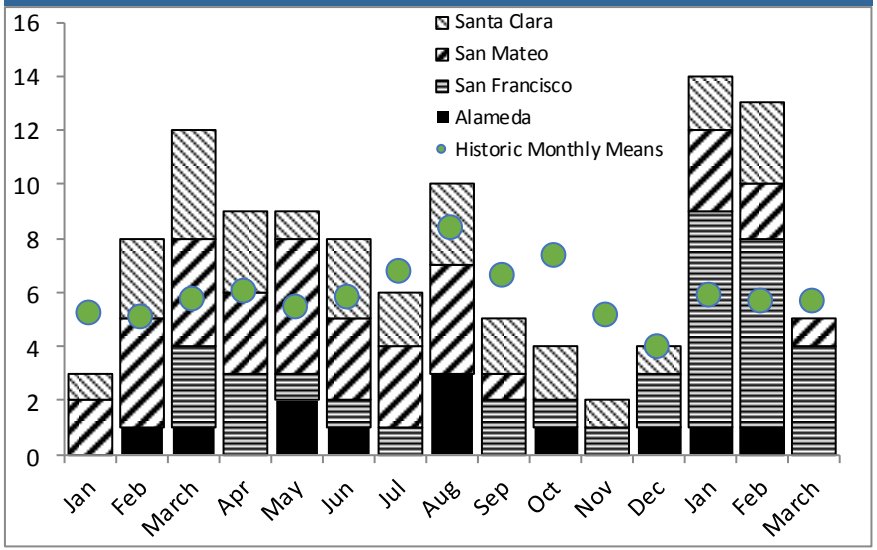

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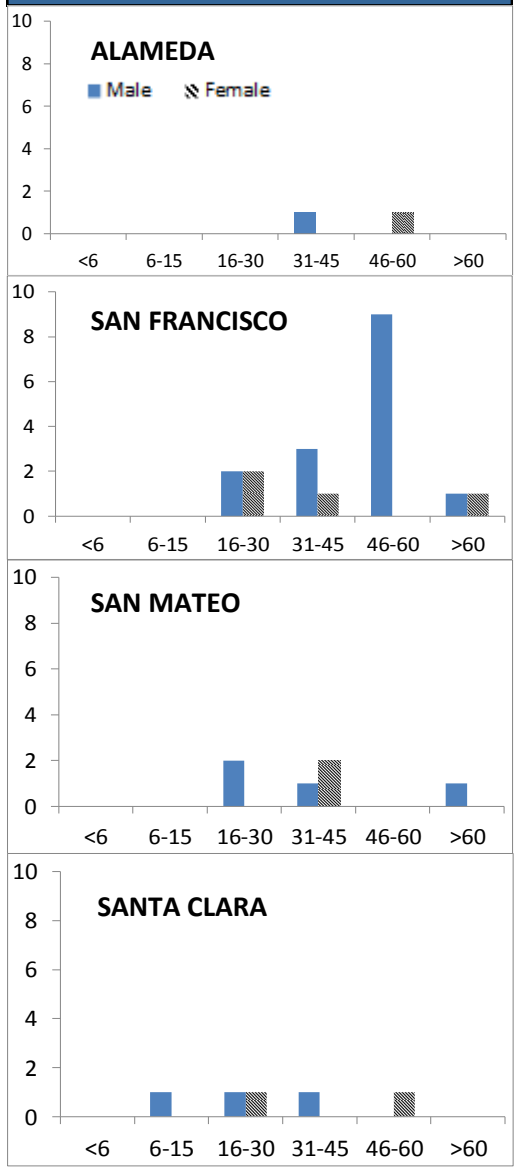
Figure 2: Case Counts by County, Age and Sex, January– March 2015



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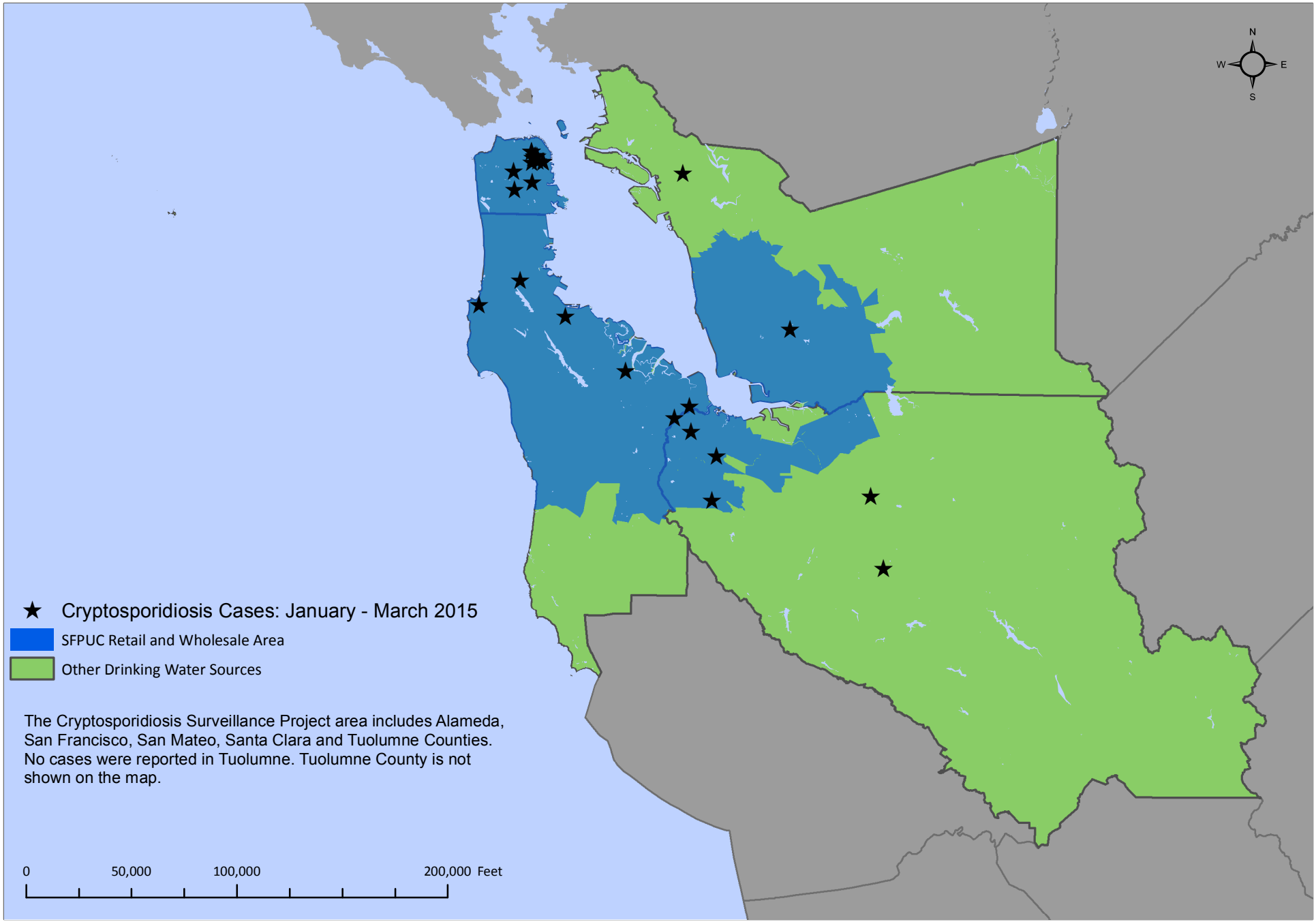

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Surveillance Summary: Second Quarter 2015:

During the first and second quarter of 2015, 65 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2014 specifically for San Francisco county. More than half of the cases (58%) were due to an increase in San Francisco for cases that were mainly homeless or marginally housed, and were immunocompromised. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2015

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	5	80%	0.31
San Francisco	38	76%	4.49
San Mateo	15	67%	1.99
Santa Clara	7	71%	0.37
Tuolumne	0	NA	NA
Total	65	74%	1.27

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2014 and 2015. Sacramento, California, May 2015.

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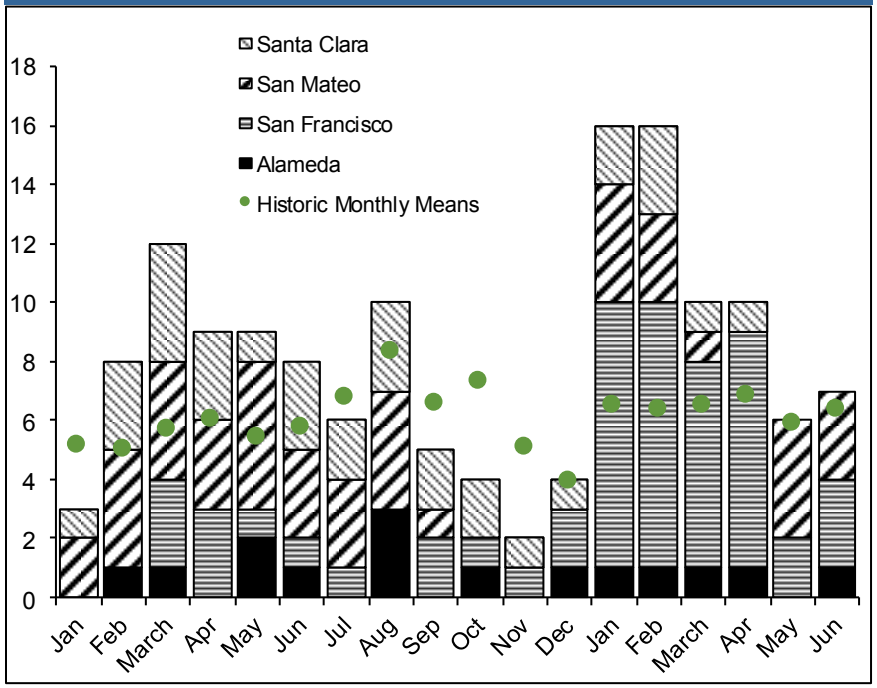

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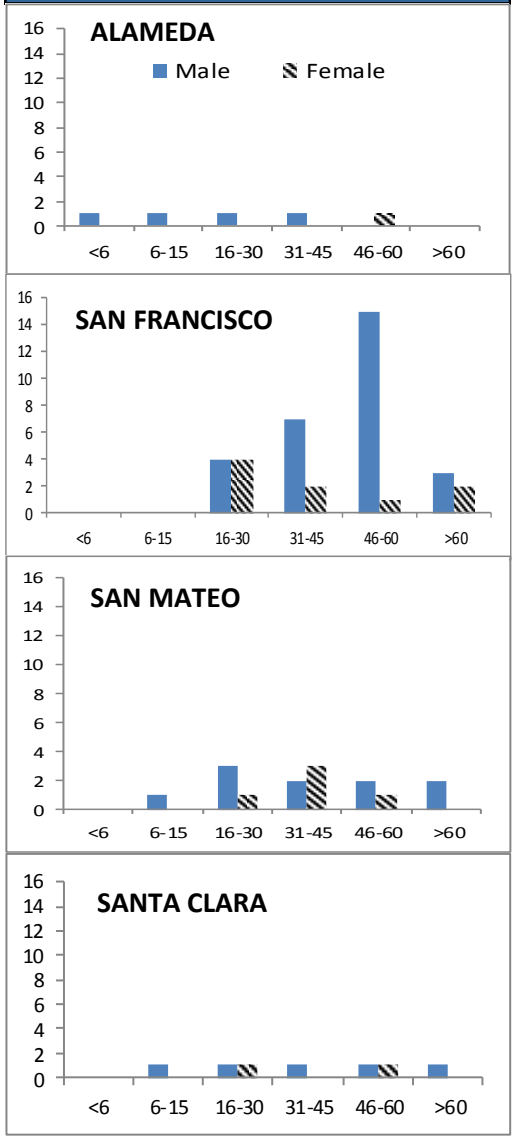
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–June 2015



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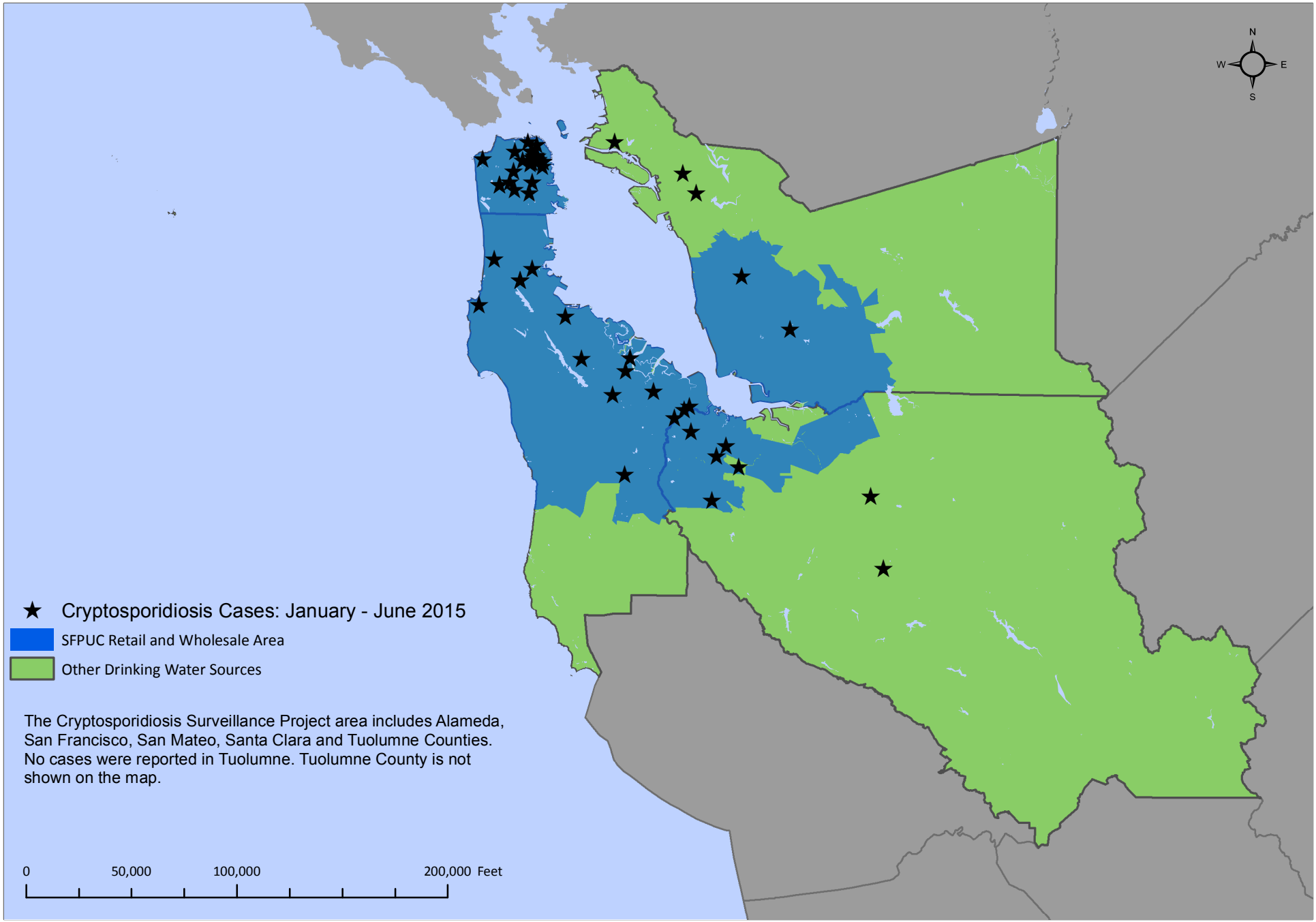
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, and Santa Clara Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Third Quarterly Report

2015

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Third Quarter 2015:

During the first, second and third quarters of 2015, 92 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2014 specifically for San Francisco county. Almost half of the cases (47%) were due to an increase in San Francisco for cases that were mainly homeless or marginally housed, and were immunocompromised. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September2015

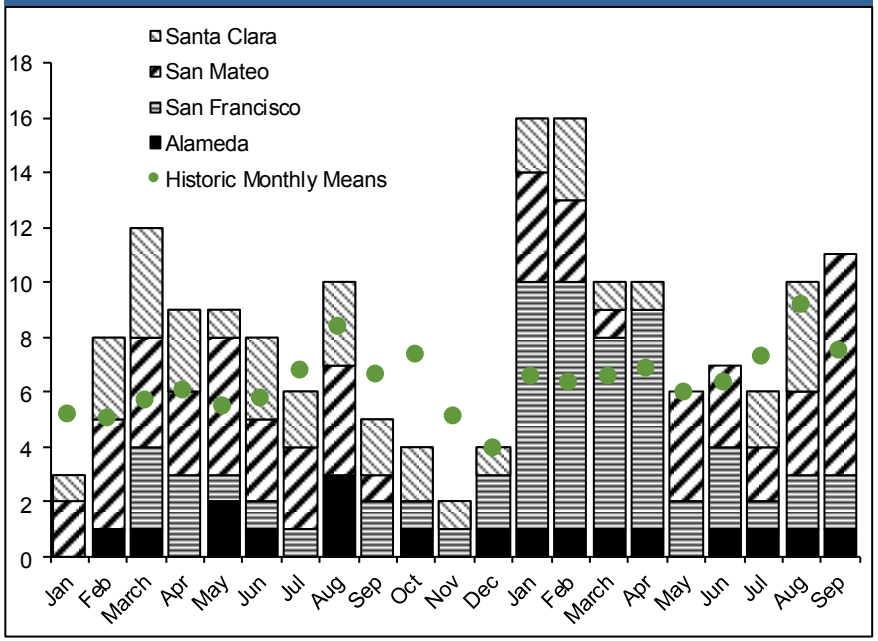
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	8	63%	0.50
San Francisco	43	75%	5.09
San Mateo	28	64%	3.72
Santa Clara	13	77%	6.88
Tuolumne	0	NA	NA
Total	92	71%	1.79

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2014 and 2015. Sacramento, California, May 2015.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2015.
- Figure 1: Monthly case totals by county for January 2014 through September 2015.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through September 2015.

Figure 1: Cryptosporidiosis Cases by Month and County, January–September 2015



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

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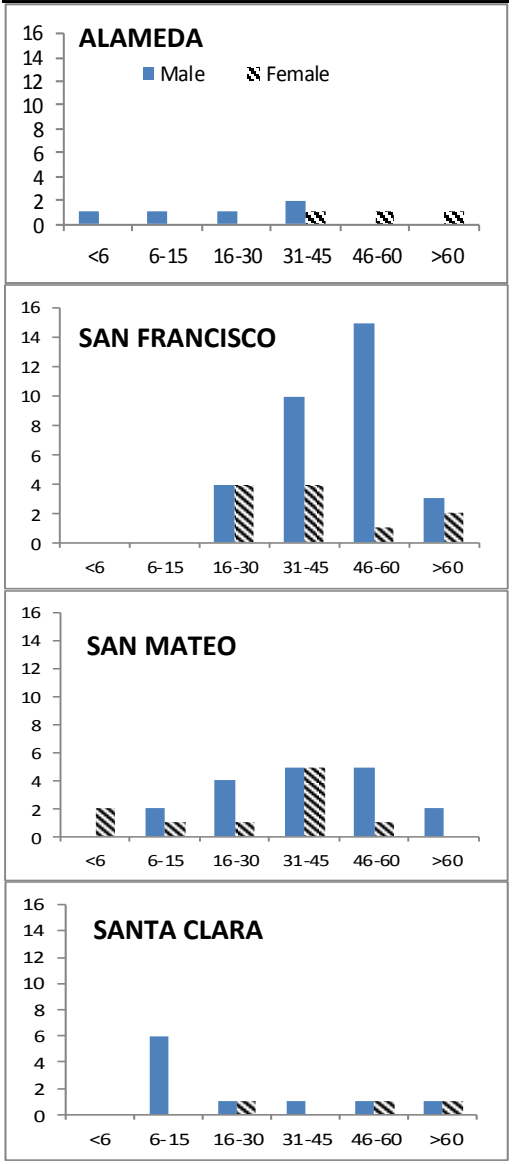
Figure 2: Case Counts by County, Age and Sex, January–September 2015



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SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, and Santa Clara Counties

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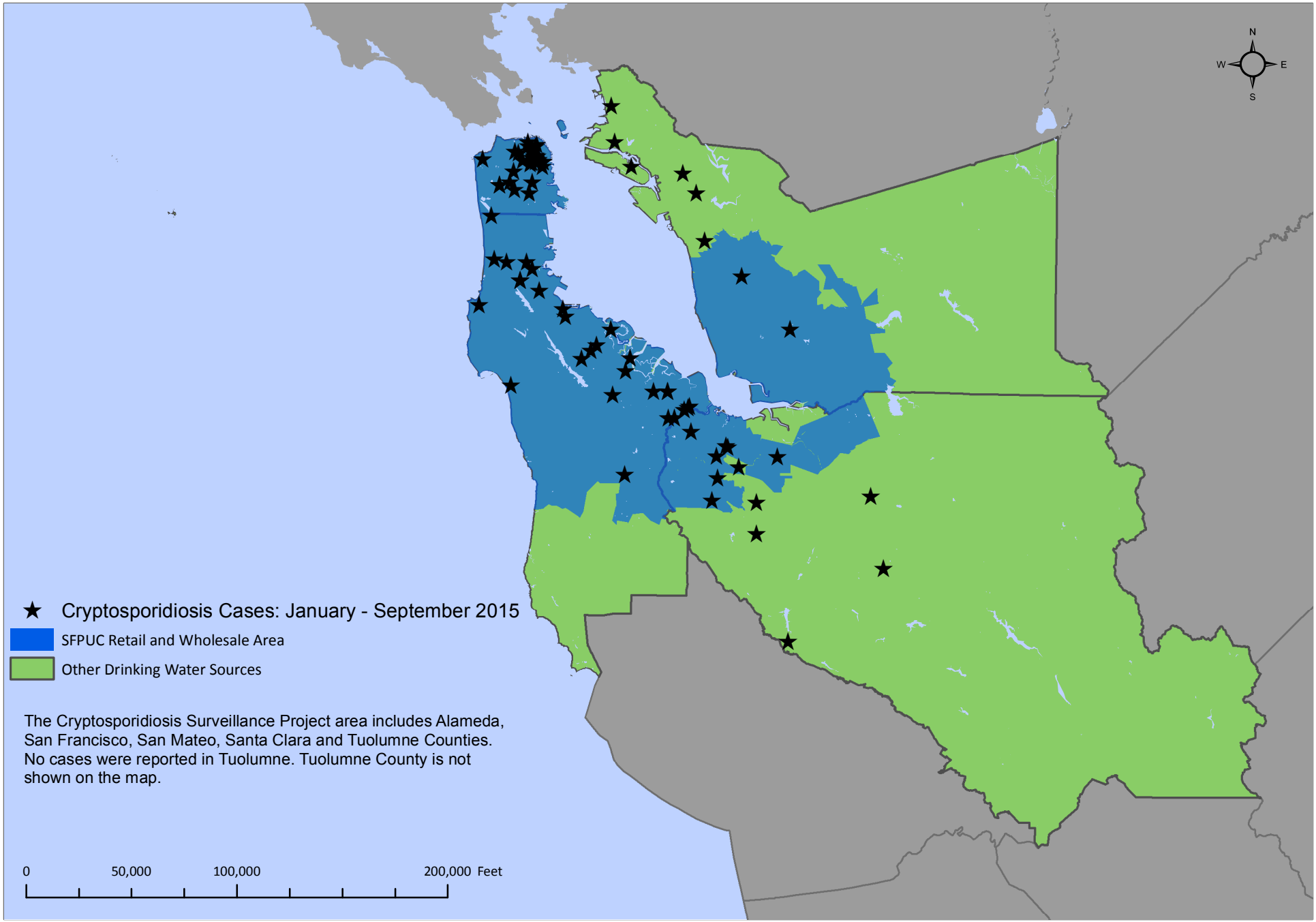


Cryptosporidiosis Surveillance Project Annual Report 2015

The Bay Area Cryptosporidiosis Surveillance Project (CSP) monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary

Fourth Quarter 2015: During the fourth quarter of 2015, 23 cases of cryptosporidiosis were reported in the project area. More cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

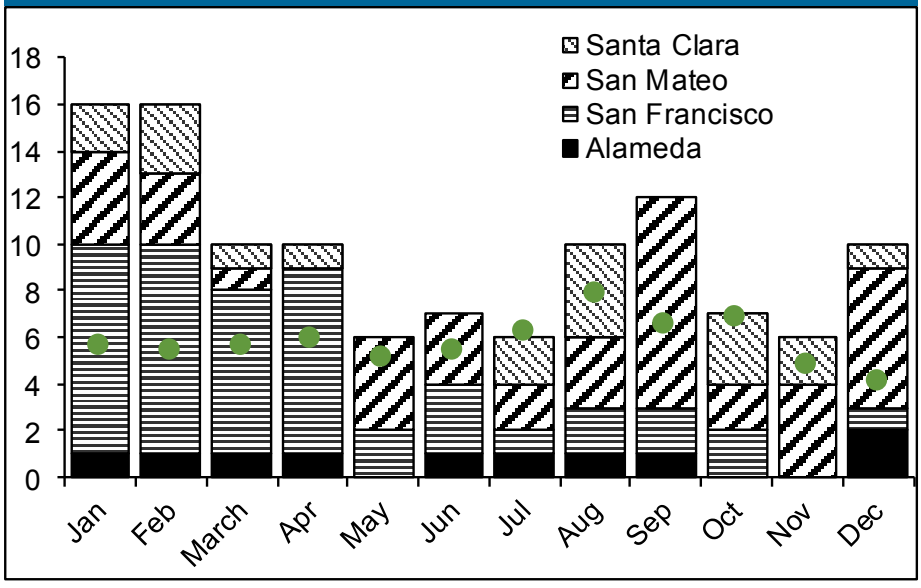
2015 Surveillance: In 2015 a total of 116 cases were reported. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 5.44 cryptosporidiosis cases per 100,000 residents in San Mateo and San Francisco counties (Table 1). Compared to 2014, the incidence of cryptosporidiosis decreased for Santa Clara and Alameda counties and increased for San Francisco and San Mateo counties. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2015

County	N	Cumulative Incidence per 100,000‡
Alameda	10	0.63
San Francisco	46	5.44
San Mateo	41	5.44
Santa Clara	19	1.01
Tuolumne	0	NA
Total	116	2.26

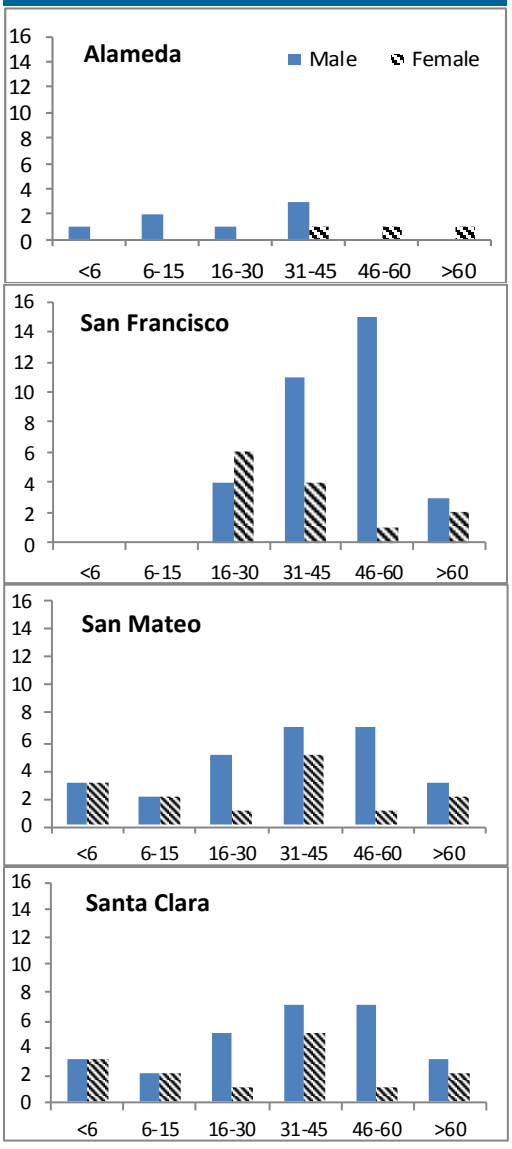
‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2014 and 2015. Sacramento, California, May 2015.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2015 - December 2015



No cases reported in Tuolumne County.
Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010-2014.
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–December 2015



Cryptosporidiosis Case Demographics and Risk Factors

In 2015, 44 (38%) of cryptosporidiosis cases were white and 79 (68%) were male. Data on race/ethnicity were not collected for 32 (28%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2015, 12 (10%) reported contact with a suspected case during the incubation period. Twenty-five (26%) cases over age 15 reported sexual contact during the incubation period; thirteen (14%) adult male cases reported MSM activity. Thirty-seven (32%) cases reported compromised immune status. Thirty-eight (33%) cases reported contact with animals during the incubation period; six (5%) had contact with farm or non-domesticated animals. Twenty-seven (23%) cases reported foreign travel. Thirty (26%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2015

	N	(%) by County
Alameda		
Male	7	(70%)
White	2	(20%)
Black	1	(10%)
Asian	1	(10%)
Hispanic	1	(10%)
Unknown/Missing	5	(50%)
San Francisco		
Male	33	(72%)
White	17	(37%)
Black	3	(7%)
Asian	3	(7%)
Hispanic	7	(15%)
Unknown/Missing	16	(35%)
San Mateo		
Male	27	(66%)
White	18	(44%)
Black	1	(2%)
Asian	7	(17%)
Hispanic	9	(22%)
Unknown/Missing	6	(15%)
Santa Clara		
Male	12	(63%)
White	7	(37%)
Asian	1	(5%)
Hispanic	4	(21%)
Multiple/Other	2	(11%)
Unknown/Missing	5	(26%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2015

Risk Factor	County	(%)
Contact with Suspect Case	Alameda	(10%)
	San Francisco	(9%)
	San Mateo	(15%)
	Santa Clara	(5%)
Daycare	Alameda	(10%)
	San Mateo	(10%)
Sexual Activity*	Alameda	(20%)
	San Francisco	(30%)
	San Mateo	(17%)
	Santa Clara	(11%)
MSM**	Alameda	(10%)
	San Francisco	(15%)
	San Mateo	(10%)
	Santa Clara	(5%)
Contact with Farm or Non-Domesticated Animals	San Francisco	(4%)
	Santa Mateo	(7%)
	Santa Clara	(5%)
Immune Suppression	Alameda	(10%)
	San Francisco	(61%)
	San Mateo	(20%)
Foreign Travel	Alameda	(10%)
	San Francisco	(13%)
	San Mateo	(37%)
	Santa Clara	(26%)
Recreational Water Contact ***	Alameda	(20%)
	San Francisco	(17%)
	San Mateo	(32%)
	Santa Clara	(37%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2015, CSP received case notification of positive *Cryptosporidium* laboratory results for 69% of the 116 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 63% of cases in 2015. Interviews were completed within one business day of notification for 44% of all interviewed cases.

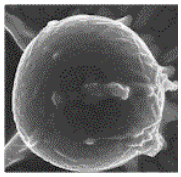


Table 4: Median Days between Specimen Collection and Report to CSP, 2015

		N	Median	Min	Max
2015		116	4	1	86
Quarter					
	Quarter 1	42	9	1	86
	Quarter 2	23	4	1	38
	Quarter 3	28	2	1	25
	Quarter 4	23	1	1	9
Informant					
	California Emerging Infections Program	9	13	3	48
	Clinical Diagnostic Laboratory	44	8	1	86
	County Health Department	79	3	1	66
County					
	Alameda	10	10	3	48
	San Francisco	46	8	1	86
	San Mateo	41	2	1	38
	Santa Clara	19	3	1	65

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2015

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	7	15	7	48
	Alameda County Public Health Department	3	4	3	9
	Quarter 1	3	24	15	48
	Quarter 2	2	6	9	38
	Quarter 3	3	7	4	10
	Quarter 4	2	5	3	7
San Francisco	San Francisco Communicable Disease Control	46	8	1	86
	Quarter 1	25	12	1	86
	Quarter 2	13	4	1	26
	Quarter 3	5	2	1	25
	Quarter 4	3	3	1	9
San Mateo	San Mateo County Health Services Agency	39	2	1	38
	Clinical Diagnostic Laboratory	1	1	1	1
	San Francisco County Health Department	1	1	1	1
	Quarter 1	8	5	1	38
	Quarter 2	7	4	1	6
	Quarter 3	14	2	1	6
	Quarter 4	12	1	1	8
Santa Clara	California Emerging Infections Program	2	9	5	13
	Santa Clara County Public Health Department	17	2	1	65
	Quarter 1	6	6	2	65
	Quarter 2	1	4	4	4
	Quarter 3	6	2	1	9
	Quarter 4	6	2	1	5

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Cryptosporidiosis Surveillance Project

First Quarterly Report

2016

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

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Surveillance Summary: First Quarter 2016:

During the first quarter of 2016, 20 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2015. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–March 2016

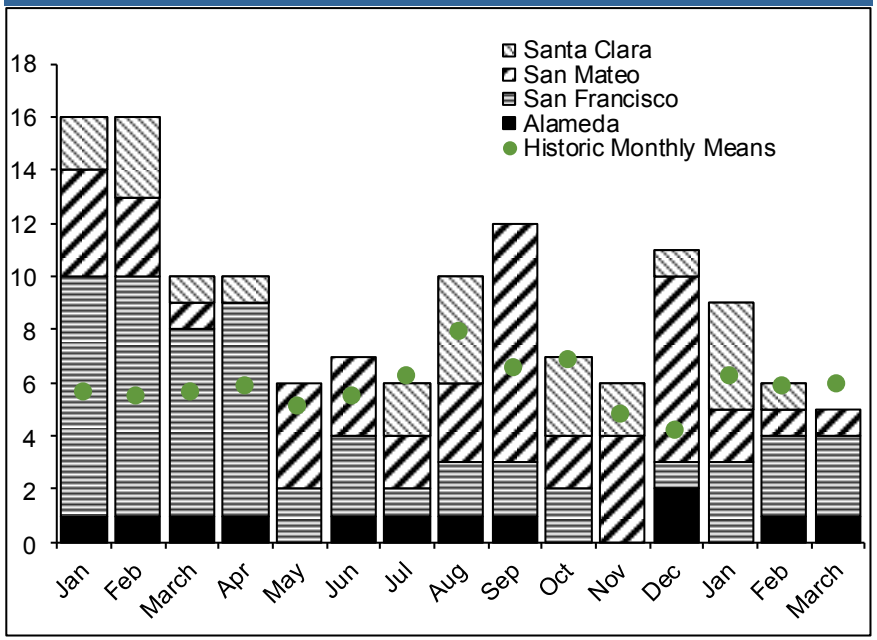
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	2	50%	0.12
San Francisco	9	78%	1.04
San Mateo	4	50%	0.52
Santa Clara	5	40%	0.26
Tuolumne	0	NA	NA
Total	20	60%	0.38

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2015. Sacramento, California, December 2015.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2016.
- Figure 1: Monthly case totals by county for January 2015 through March 2016.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through March 2016.

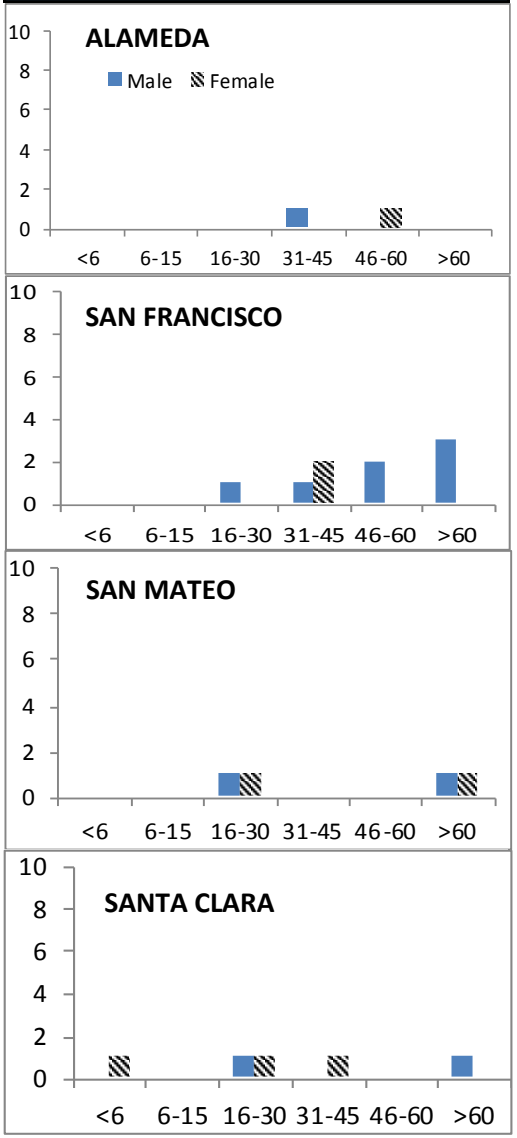
Figure 1: Cryptosporidiosis Cases by Month and County, January–March 2016



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2016



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POPULATION HEALTH DIVISION
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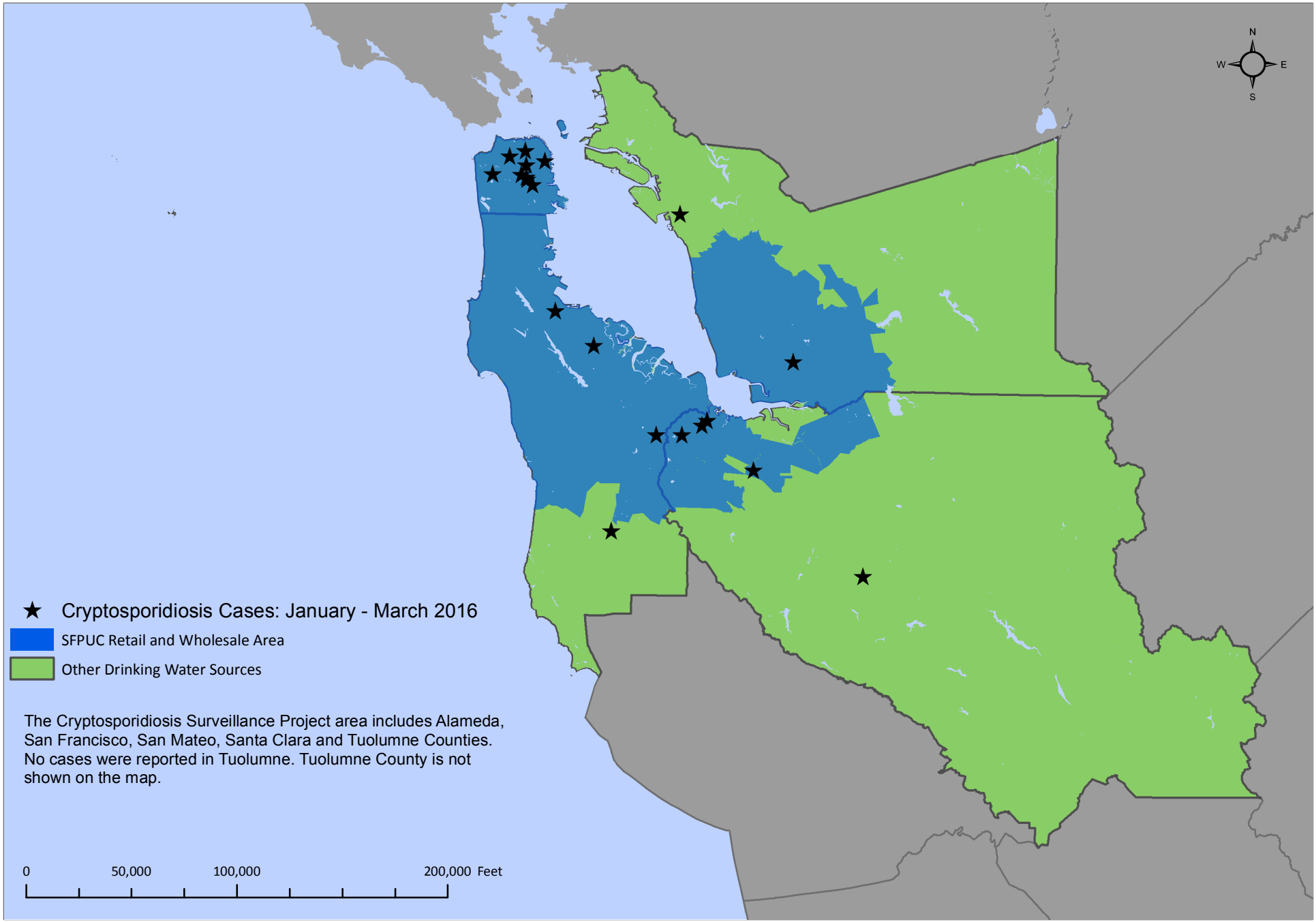
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, and Santa Clara Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Second Quarterly Report

2016

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

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Surveillance Summary: Second Quarter 2016:

During the second quarter of 2016, 33 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2015. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2016

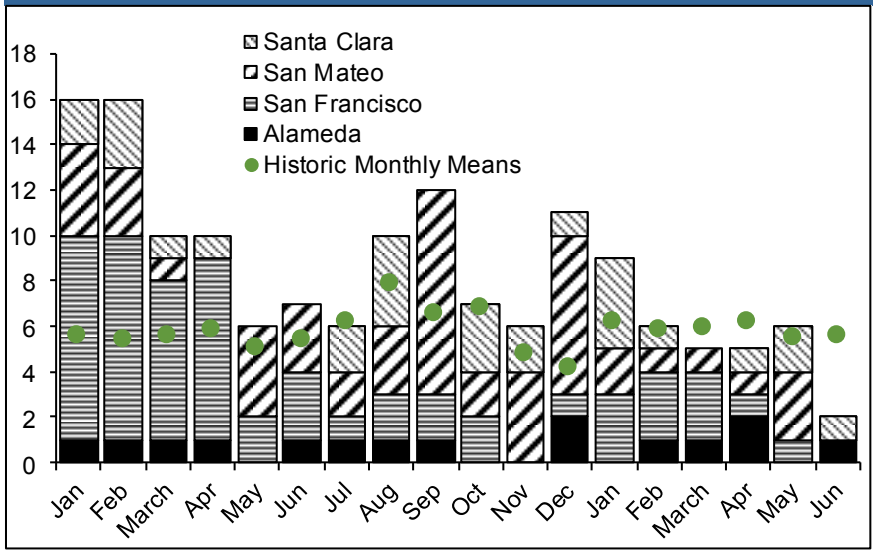
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	5	60%	0.31
San Francisco	11	73%	1.28
San Mateo	8	50%	1.05
Santa Clara	9	33%	0.47
Tuolumne	0	NA	NA
Total	33	55%	0.63

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2015. Sacramento, California, December 2015.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2016.
- Figure 1: Monthly case totals by county for January 2015 through June 2016.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through June 2016.

Figure 1: Cryptosporidiosis Cases by Month and County, January–June 2016



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

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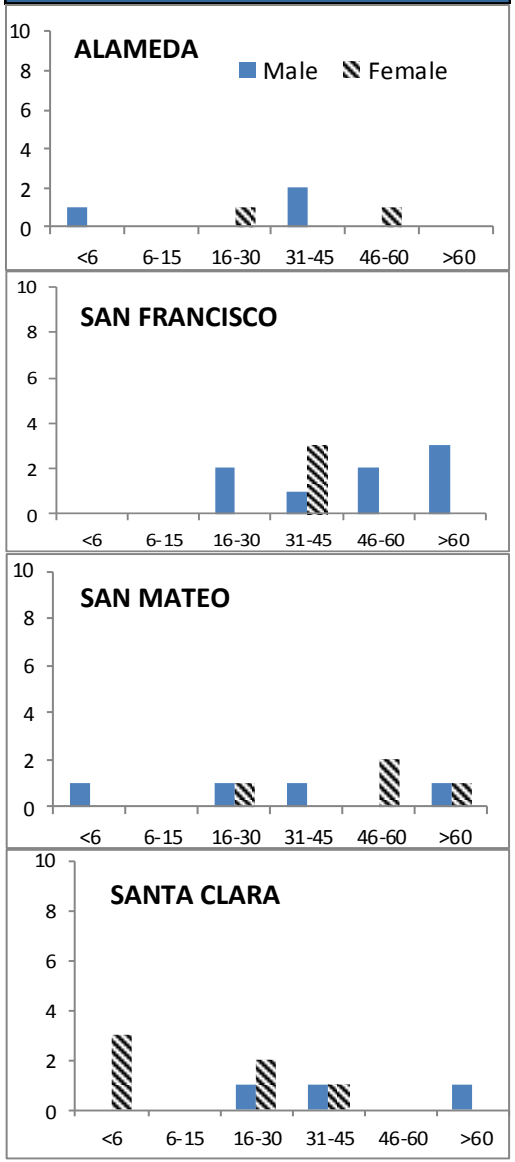
Figure 2: Case Counts by County, Age and Sex, January– June 2016



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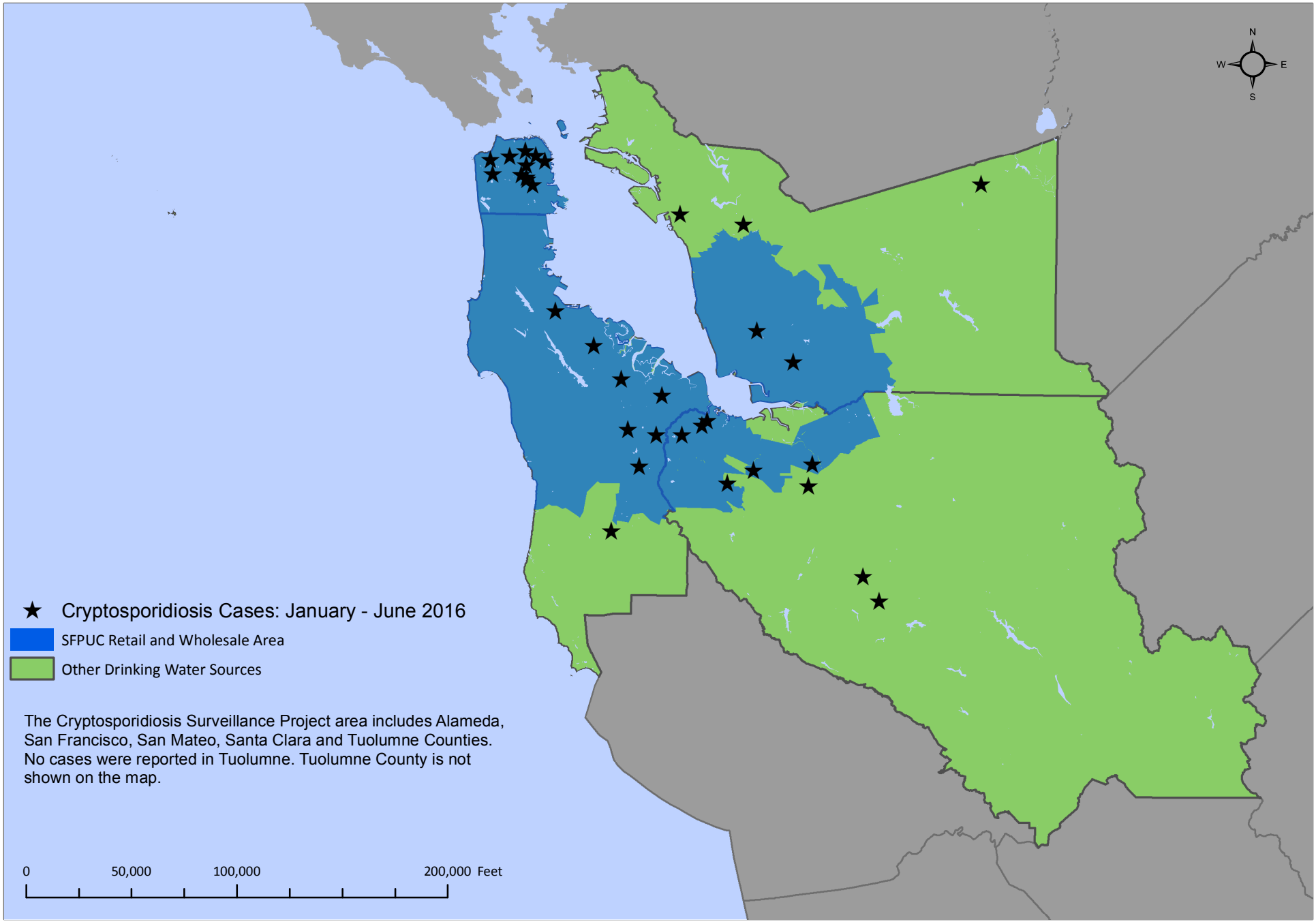
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, and Santa Clara Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Third Quarterly Report

2016

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SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

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Surveillance Summary: Third Quarter 2016:

During the first, second and third quarters of 2016, 55 cryptosporidiosis cases were reported. A lower number of cases were reported than in the same period in 2015. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2016

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	6	67%	0.37
San Francisco	19	63%	2.20
San Mateo	14	50%	1.83
Santa Clara	16	31%	0.84
Tuolumne	0	NA	NA
Total	55	51%	1.05

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2015. Sacramento, California, December 2015.

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Figure 1: Cryptosporidiosis Cases by Month and County, January–September 2016

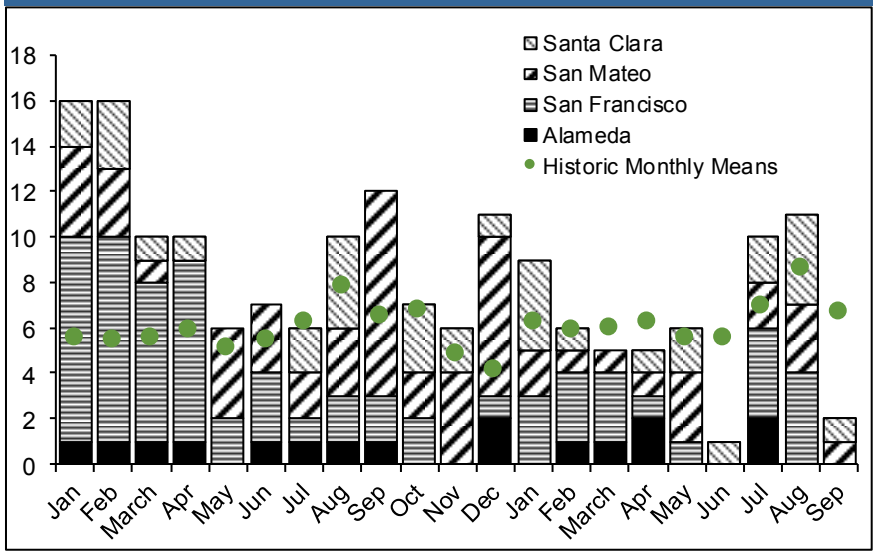

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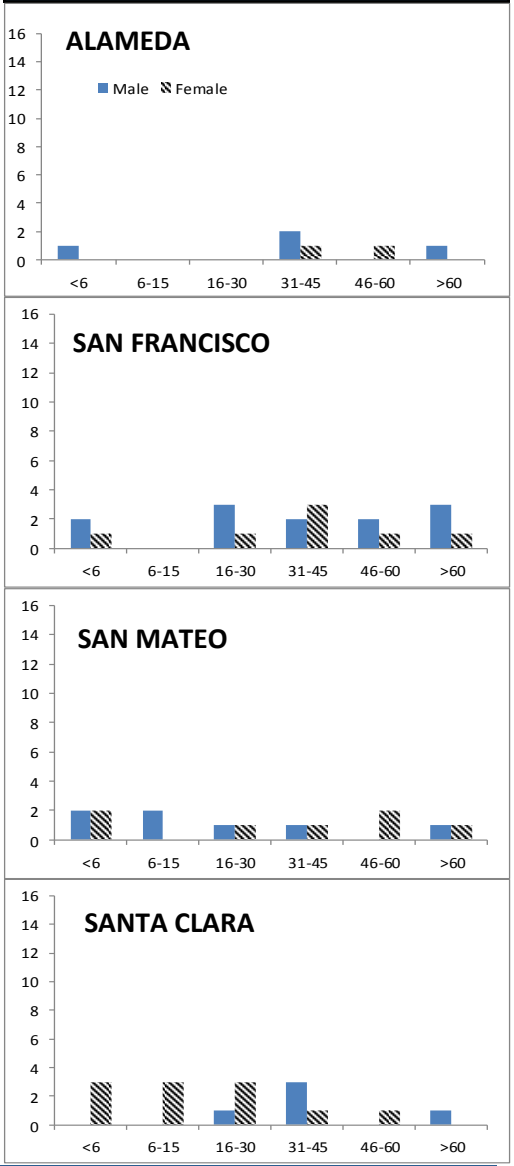
Figure 2: Case Counts by County, Age and Sex, January–September 2016



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The Bay Area Cryptosporidiosis Surveillance Project

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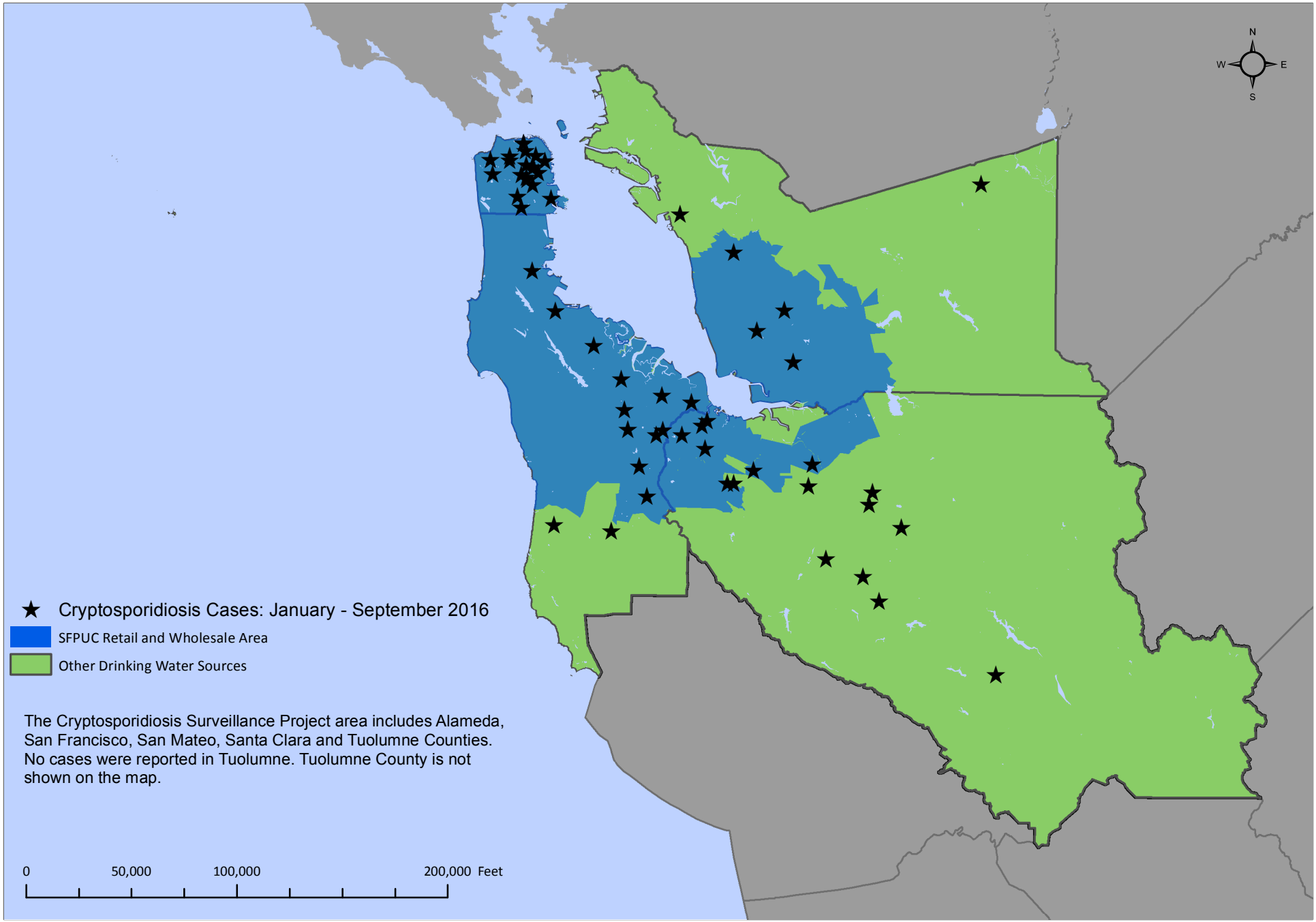

Cryptosporidiosis Surveillance Project Annual Report 2016

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Surveillance Summary

Fourth Quarter 2016: During the fourth quarter of 2016, 26 cases of cryptosporidiosis were reported in the project area. More cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

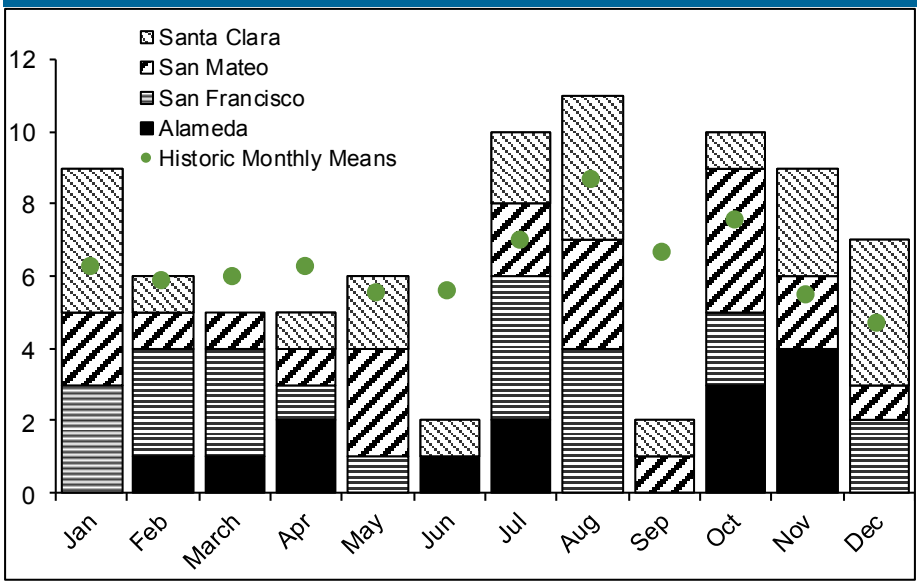
2016 Surveillance: In 2016 a total of 82 cases were reported. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 2.74 cryptosporidiosis cases per 100,000 residents in San Mateo county (Table 1). Compared to 2015, the incidence of cryptosporidiosis decreased for San Francisco and San Mateo counties and increased for Santa Clara and Alameda counties. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2016

County	N	Cumulative Incidence per 100,000‡
Alameda	14	0.86
San Francisco	23	2.66
San Mateo	21	2.74
Santa Clara	24	1.25
Tuolumne	0	NA
Total	82	1.57

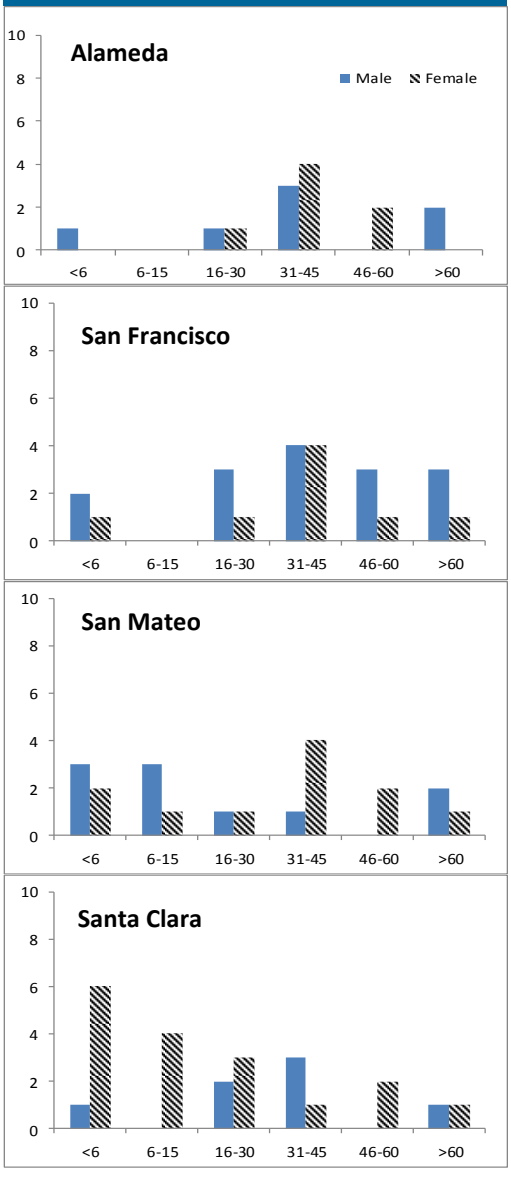
‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2016 and 2017. Sacramento, California, May 2017.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2016 - December 2016



No cases reported in Tuolumne County.
Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010-2014.
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–December 2016



Cryptosporidiosis Case Demographics and Risk Factors

In 2016, 39 (48%) of cryptosporidiosis cases were white and 39 (48%) were male. Data on race/ethnicity were not collected for 17 (21%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2016, 7 (9%) reported contact with a suspected case during the incubation period. Eighteen (31%) cases over age 15 reported sexual contact during the incubation period; six (10%) adult male cases reported MSM activity. Eight (10%) cases reported compromised immune status. Thirty-five (43%) cases reported contact with animals during the incubation period; thirteen (16%) had contact with farm or non-domesticated animals. Nineteen (23%) cases reported foreign travel. Thirty-five (43%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2016

	N	(%) by County
Alameda		
Male	7	(50%)
White	8	(57%)
Asian	1	(7%)
Multiple	1	(7%)
Unknown/Missing	4	(29%)
San Francisco		
Male	15	(65%)
White	14	(61%)
Black	3	(13%)
Asian	1	(4%)
Hispanic	4	(17%)
Unknown/Missing	1	(4%)
San Mateo		
Male	10	(48%)
White	12	(57%)
Asian	2	(10%)
Hispanic	3	(14%)
Unknown/Missing	4	(19%)
Santa Clara		
Male	7	(29%)
White	5	(21%)
Asian	4	(17%)
Hispanic	6	(25%)
Multiple/Other	1	(4%)
Unknown/Missing	8	(33%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2016

Risk Factor	County	(%)
Contact with Suspect Case	Alameda	(7%)
	San Francisco	(13%)
	San Mateo	(5%)
	Santa Clara	(8%)
Daycare	Alameda	(7%)
	San Francisco	(4%)
	San Mateo	(24%)
	Santa Clara	(17%)
Sexual Activity*	Alameda	(29%)
	San Francisco	(22%)
	San Mateo	(24%)
	Santa Clara	(13%)
MSM**	Alameda	(7%)
	San Francisco	(22%)
Contact with Farm or Non-Domesticated Animals	Alameda	(29%)
	San Francisco	(4%)
	San Mateo	(24%)
	Santa Clara	(13%)
Immune Suppression	Alameda	(14%)
	San Francisco	(26%)
Foreign Travel	Alameda	(14%)
	San Francisco	(26%)
	San Mateo	(19%)
	Santa Clara	(29%)
Recreational Water Contact ***	Alameda	(36%)
	San Francisco	(39%)
	San Mateo	(52%)
	Santa Clara	(42%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2016, CSP received case notification of positive *Cryptosporidium* laboratory results for 73% of the 82 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 82% of cases in 2016. Interviews were completed within one business day of notification for 42% of all interviewed cases.

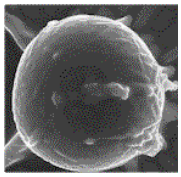


Table 4: Median Days between Specimen Collection and Report to CSP, 2016

		N	Median	Min	Max
2016		82	3	1	241
Quarter					
	Quarter 1	20	3	1	11
	Quarter 2	13	3	1	35
	Quarter 3	23	3	1	24
	Quarter 4	26	2	1	241
Informant					
	California Emerging Infections Program	10	11	7	241
	County Health Department	72	2	1	47
County					
	Alameda	14	6	1	18
	San Francisco	23	7	1	53
	San Mateo	21	1	1	241
	Santa Clara	24	2	1	13

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2016

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	2	11	9	12
	Alameda County Public Health Department	12	5	1	18
	Quarter 1	2	8	7	9
	Quarter 2	3	5	4	4
	Quarter 3	2	7	2	12
	Quarter 4	7	3	1	16
San Francisco	San Francisco Communicable Disease Control	17	3	1	47
	California Emerging Infections Program	6	9	7	53
	Quarter 1	9	1	1	11
	Quarter 2	2	26	17	35
	Quarter 3	8	4	1	24
	Quarter 4	4	28	2	53
San Mateo	San Mateo County Health Services Agency	19	1	1	7
	California Emerging Infections Program	2	214	186	241
	Quarter 1	4	2	1	7
	Quarter 2	4	1	1	3
	Quarter 3	6	1	1	2
	Quarter 4	7	2	1	241
Santa Clara	Santa Clara County Public Health Department	24	2	1	13
	Quarter 1	5	1	1	4
	Quarter 2	4	2	1	4
	Quarter 3	7	4	2	13
	Quarter 4	8	2	1	9

This report was created in February 2018 by the San Francisco Department of Public Health Environmental Health Branch in partnership with the San Francisco Public Utilities Commission.
For more information, contact mina.mohammadi@sfdph.org or visit our website at :
https://www.sfdph.org/dph/EH/Water/Crypto.asp

Cryptosporidiosis Surveillance Project

First Quarterly Report

2017

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: First Quarter 2017:

During the first quarter of 2017, 17 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2016. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–March 2017

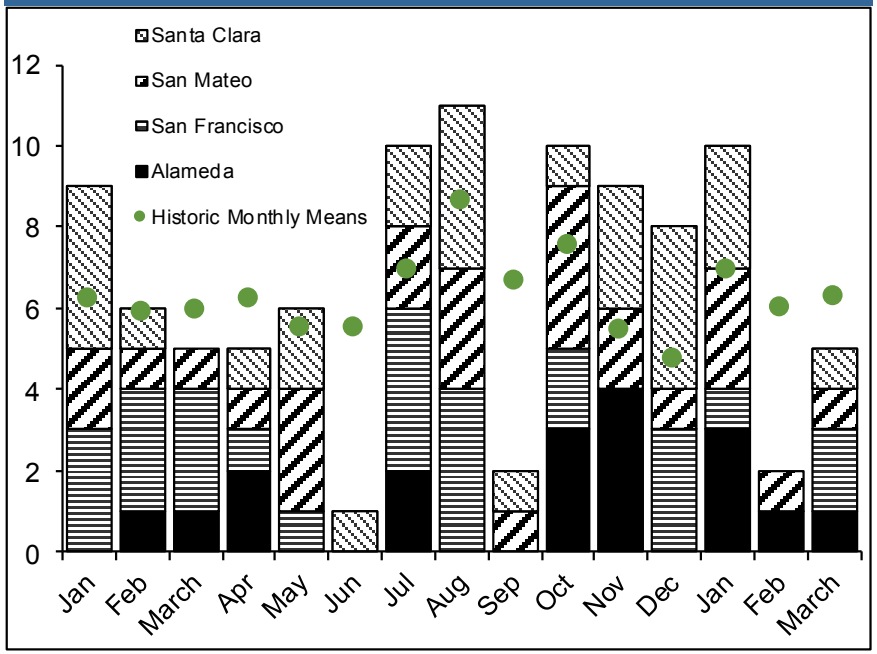
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	5	60%	0.31
San Francisco	3	33%	0.34
San Mateo	5	40%	0.65
Santa Clara	4	25%	0.21
Tuolumne	0	NA	NA
Total	17	41%	0.32

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2016. Sacramento, California, December 2016.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2017.
- Figure 1: Monthly case totals by county for January 2016 through March 2017.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through March 2017.

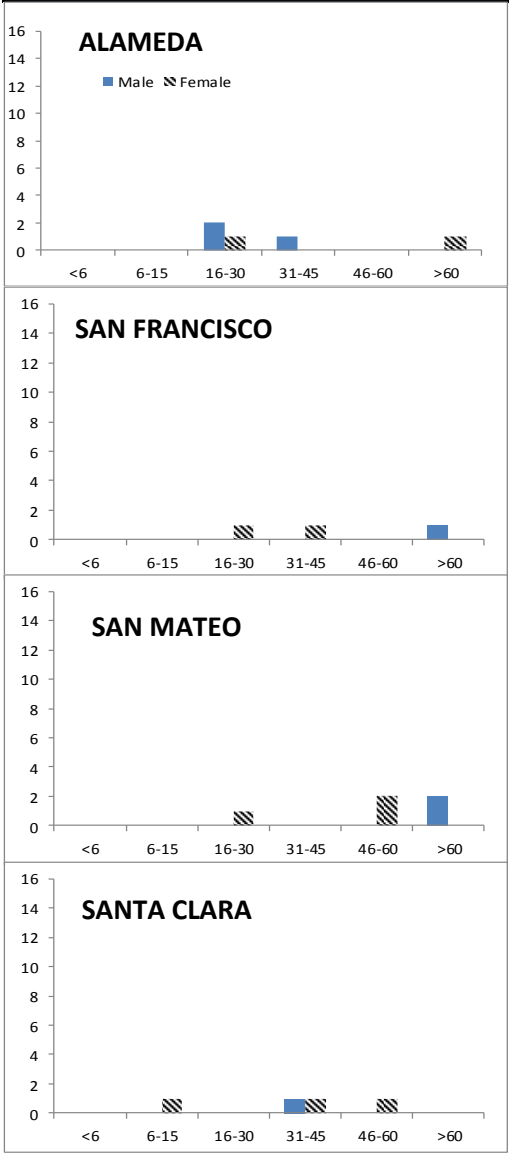
Figure 1: Cryptosporidiosis Cases by Month and County, January–March 2017



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2017



This report was created in July 2017 by the San Francisco Department of Public Health Environmental Health Branch in partnership with the San Francisco Public Utilities Commission.
For more information, contact mina.mohammadi@sfdph.org or visit our website at https://www.sfdph.org/dph/EH/Water/Crypto.asp
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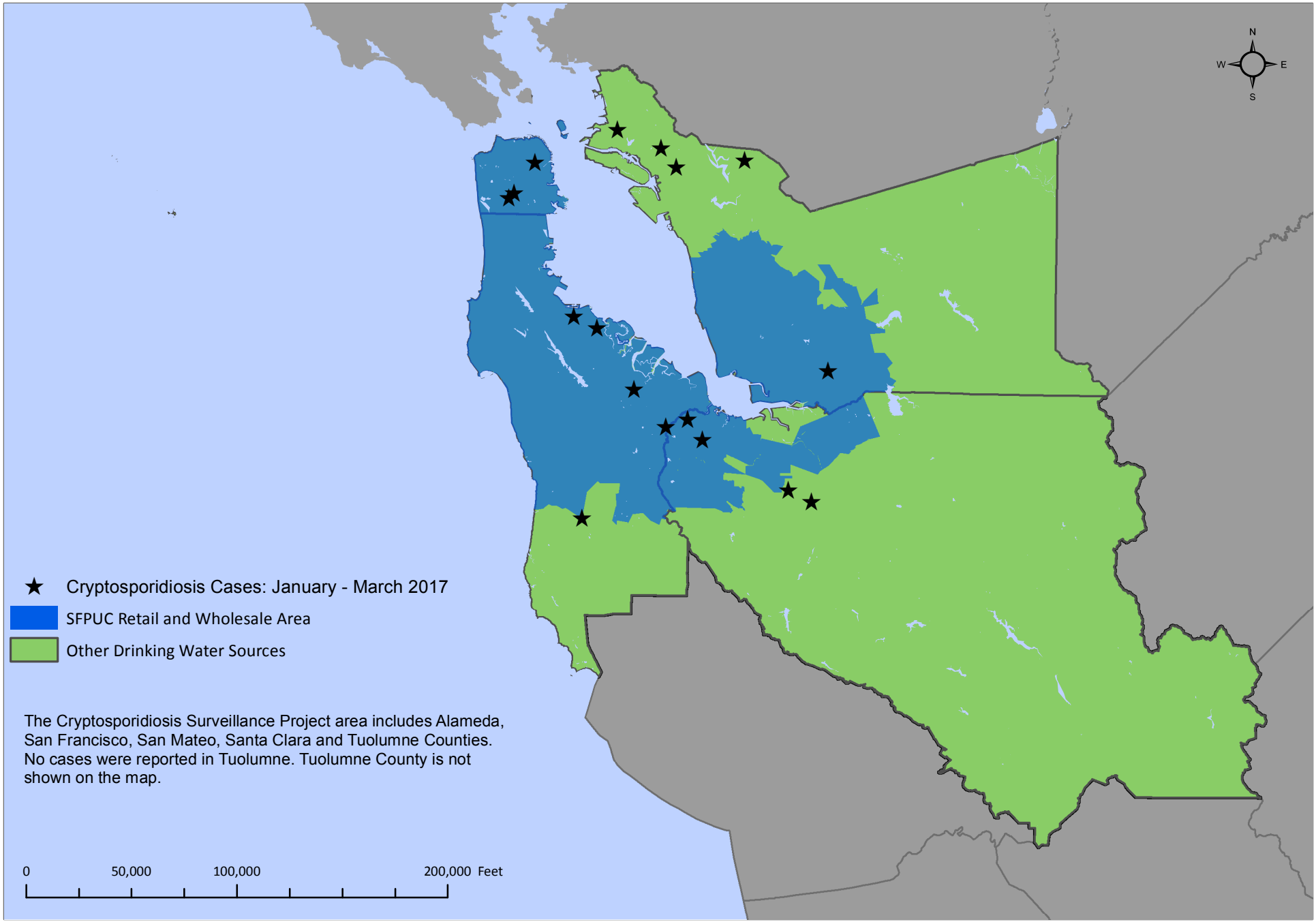
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, and Santa Clara Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Second Quarterly Report

2017

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Second Quarter 2017:

During the second quarter of 2017, 39 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2016. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2017

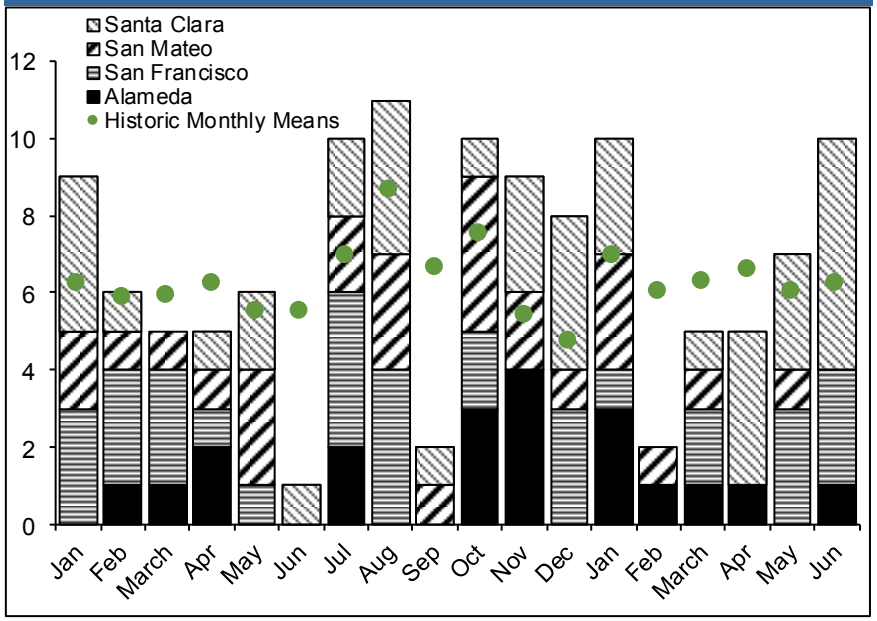
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	7	71%	0.43
San Francisco	9	67%	1.03
San Mateo	6	33%	0.78
Santa Clara	17	41%	0.88
Tuolumne	0	NA	NA
Total	39	51%	0.74

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2016. Sacramento, California, December 2016.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2017.
- Figure 1: Monthly case totals by county for January 2016 through June 2017.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through June 2017.

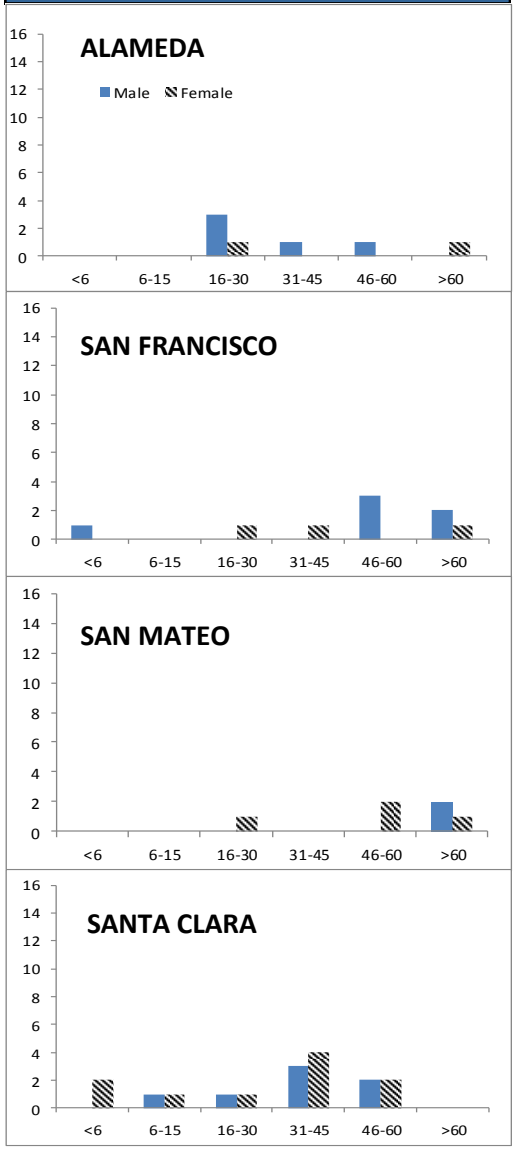
Figure 1: Cryptosporidiosis Cases by Month and County, January–June 2017



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– June 2017



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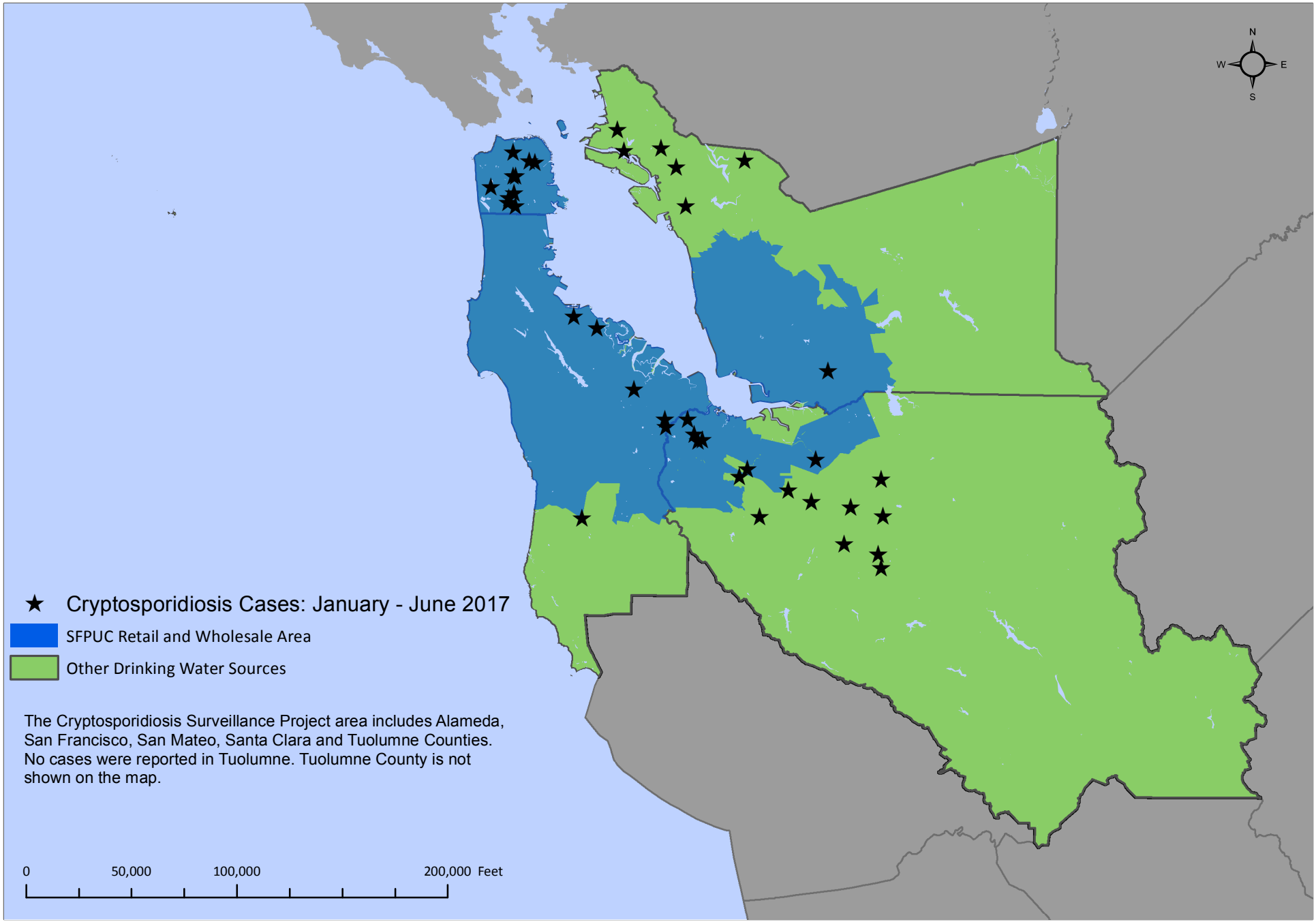
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, and Santa Clara Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Third Quarterly Report

2017

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Third Quarter 2017:

During the first, second and third quarters of 2017, 88 cryptosporidiosis cases were reported. A lower number of cases were reported than in the same period in 2016. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2017

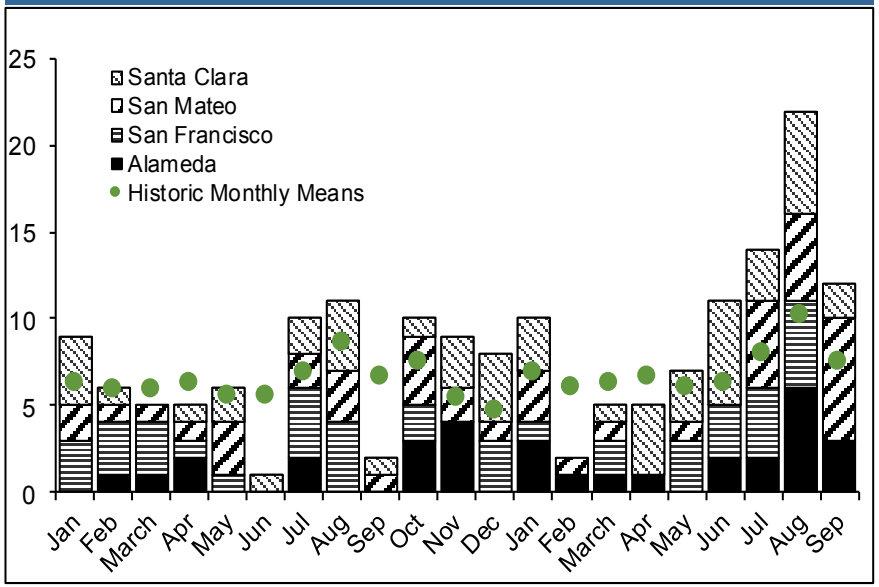
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	19	68%	1.16
San Francisco	18	72%	2.07
San Mateo	23	30%	2.99
Santa Clara	28	39%	1.45
Tuolumne	0	NA	NA
Total	88	50%	1.67

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2016. Sacramento, California, December 2016.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2017.
- Figure 1: Monthly case totals by county for January 2016 through September 2017.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through September 2017.

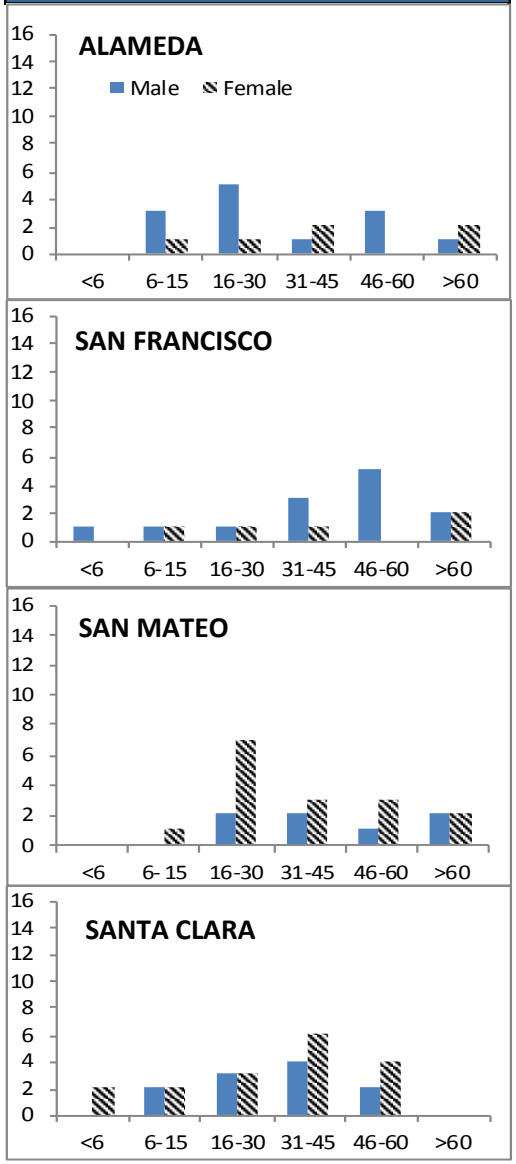
Figure 1: Cryptosporidiosis Cases by Month and County, January–September 2017



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–September 2017



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The Bay Area Cryptosporidiosis Surveillance Project

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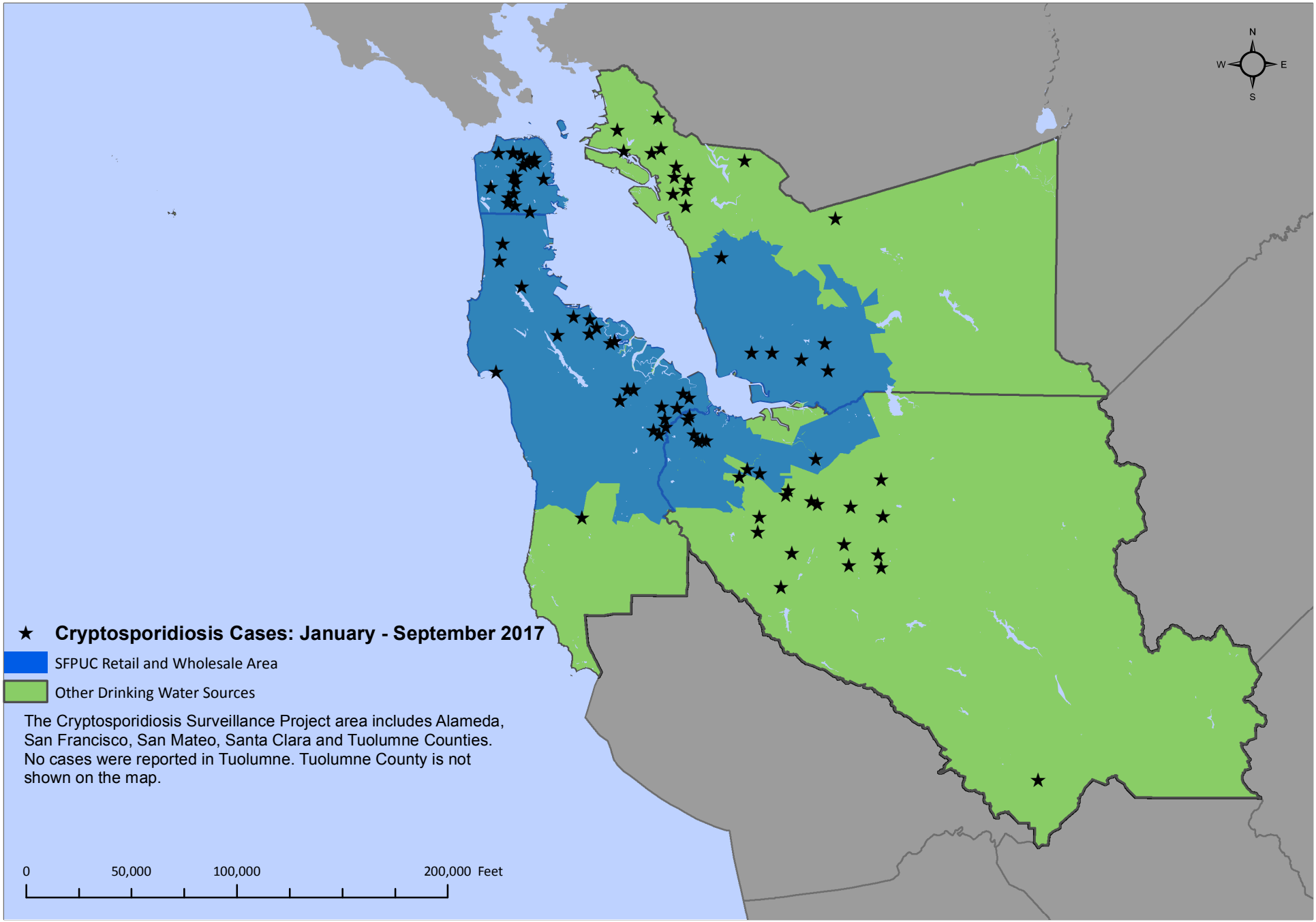


Cryptosporidiosis Surveillance Project Annual Report 2017

The Bay Area Cryptosporidiosis Surveillance Project (CSP) monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary

Fourth Quarter 2017: During the fourth quarter of 2017, 24 cases of cryptosporidiosis were reported in the project area. Fewer cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

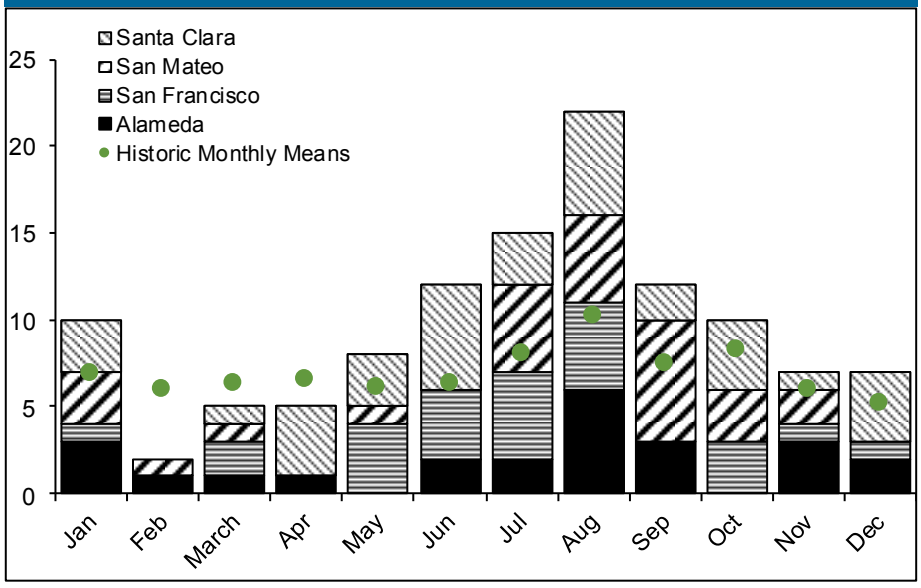
2017 Surveillance: In 2017 a total of 115 cases were reported. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 3.66 cryptosporidiosis cases per 100,000 residents in San Mateo county (Table 1). Compared to 2016, the incidence of cryptosporidiosis increased for Alameda, San Francisco, San Mateo and Santa Clara counties. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2017

County	N	Cumulative Incidence per 100,000‡
Alameda	24	1.47
San Francisco	26	3.01
San Mateo	28	3.66
Santa Clara	37	1.92
Tuolumne	0	NA
Total	115	2.20

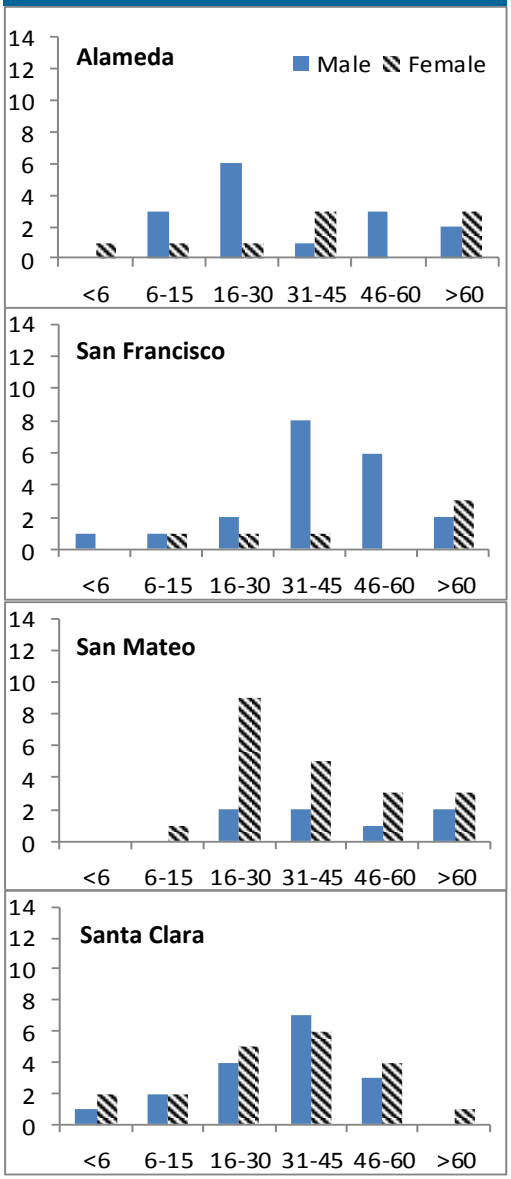
‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2016 and 2017. Sacramento, California, May 2017.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2017 - December 2017



No cases reported in Tuolumne County.
Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010-2014.
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–December 2017



Cryptosporidiosis Case Demographics and Risk Factors

In 2017, 43 (37%) of cryptosporidiosis cases were white and 59 (51%) were male. Data on race/ethnicity were not collected for 30 (26%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2017, 10 (9%) reported contact with a suspected case during the incubation period. Twenty-seven (27%) cases over age 15 reported sexual contact during the incubation period; eight (8%) adult male cases reported MSM activity. Twenty-five (22%) cases reported compromised immune status. Forty-one (36%) cases reported contact with animals during the incubation period; ten (9%) had contact with farm or non-domesticated animals. Thirty-six (31%) cases reported foreign travel. Thirty-five (30%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2017

	N	(%) by County
Alameda		
Male	15	(63%)
White	7	(29%)
Black	4	(17%)
Asian	4	(17%)
Hispanic	2	(8%)
Unknown/Missing	7	(29%)
San Francisco		
Male	20	(77%)
White	9	(35%)
Black	3	(12%)
Hispanic	3	(12%)
Other	2	(8%)
Unknown/Missing	9	(35%)
San Mateo		
Male	7	(25%)
White	10	(36%)
Asian	6	(21%)
Hispanic	5	(18%)
Unknown/Missing	7	(25%)
Santa Clara		
Male	17	(46%)
White	17	(46%)
Asian	5	(14%)
Hispanic	8	(22%)
Unknown/Missing	7	(19%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2017

Risk Factor	County	(%)
Contact with Suspect Case	Alameda	(17%)
	San Francisco	(4%)
	San Mateo	(11%)
	Santa Clara	(5%)
Daycare	Alameda	(8%)
	San Francisco	(4%)
	San Mateo	(14%)
	Santa Clara	(8%)
Sexual Activity*	Alameda	(17%)
	San Francisco	(19%)
	San Mateo	(36%)
	Santa Clara	(22%)
MSM**	Alameda	(8%)
	San Francisco	(12%)
	Santa Clara	(11%)
Contact with Farm or Non-Domesticated Animals	Alameda	(8%)
	San Francisco	(4%)
	Santa Mateo	(11%)
	Santa Clara	(11%)
Immune Suppression	Alameda	(36%)
	San Francisco	(19%)
	San Mateo	(7%)
	Santa Clara	(24%)
Foreign Travel	Alameda	(21%)
	San Francisco	(15%)
	San Mateo	(43%)
	Santa Clara	(41%)
Recreational Water Contact ***	Alameda	(25%)
	San Francisco	(35%)
	San Mateo	(36%)
	Santa Clara	(27%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2017, CSP received case notification of positive *Cryptosporidium* laboratory results for 70% of the 115 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 72% of cases in 2017. Interviews were completed within one business day of notification for 32% of all interviewed cases.

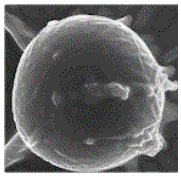


Table 4: Median Days between Specimen Collection and Report to CSP, 2017

		N	Median	Min	Max
2017		115	4	1	273
Quarter					
	Quarter 1	17	4	1	74
	Quarter 2	25	3	1	273
	Quarter 3	49	4	1	223
	Quarter 4	24	7	1	130
Informant					
	California Emerging Infections Program	7	130	6	273
	County Health Department	108	4	1	74
County					
	Alameda	24	10	1	74
	San Francisco	26	7	1	273
	San Mateo	28	4	1	15
	Santa Clara	37	2	1	9

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2017

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	2	10	1	74
	Alameda County Public Health Department	22	38	8	67
	Quarter 1	5	15	7	74
	Quarter 2	3	18	3	67
	Quarter 3	11	8	2	39
	Quarter 4	5	14	1	49
San Francisco	California Emerging Infections Program	5	223	6	273
	San Francisco Communicable Disease Control	21	6	1	67
	Quarter 1	3	6	4	67
	Quarter 2	8	5	1	273
	Quarter 3	10	7	1	223
	Quarter 4	5	17	6	130
San Mateo	San Mateo County Health Services Agency	28	4	1	15
	Quarter 1	5	3	2	5
	Quarter 2	1	3	3	3
	Quarter 3	17	4	1	15
	Quarter 4	5	6	5	9
Santa Clara	Santa Clara County Public Health Department	37	2	1	9
	Quarter 1	4	3	1	4
	Quarter 2	13	2	1	6
	Quarter 3	11	2	1	7
	Quarter 4	9	1	1	9

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Cryptosporidiosis Surveillance Project

First Quarterly Report

2018

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: First Quarter 2018:

During the first quarter of 2018, 21 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2017. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–March 2018

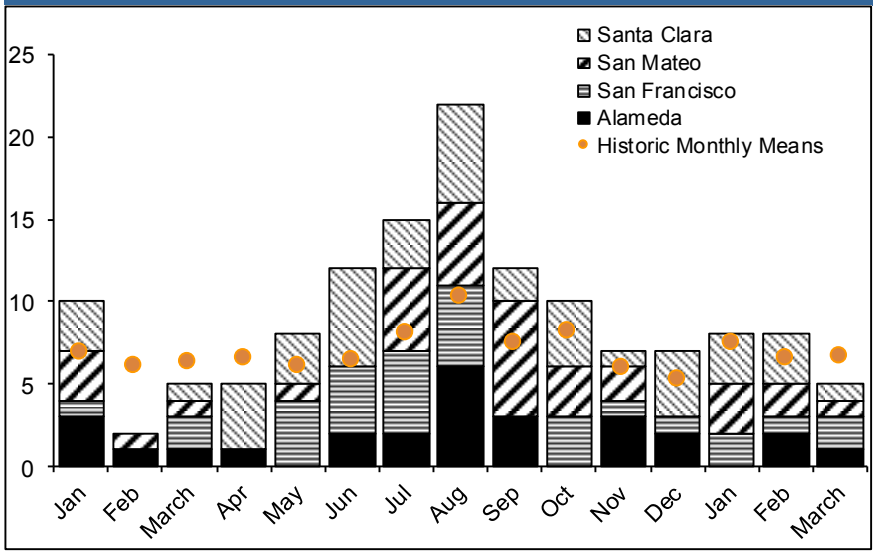
County	N	% Male	Cumulative Incidence per
Alameda	3	67%	0.18
San Francisco	5	80%	0.57
San Mateo	6	67%	0.78
Santa Clara	7	71%	0.36
Tuolumne	0	NA	NA
Total	21	71%	0.40

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2017. Sacramento, California, December 2017.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2018.
- Figure 1: Monthly case totals by county for January 2017 through March 2018.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through March 2018.

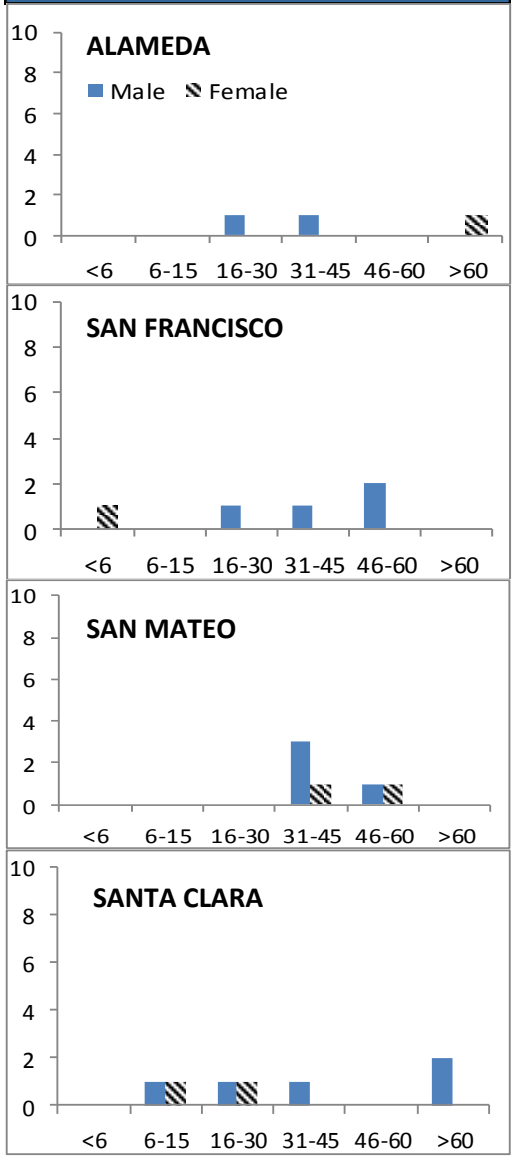
Figure 1: Cryptosporidiosis Cases by Month and County, January–March 2018



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2018



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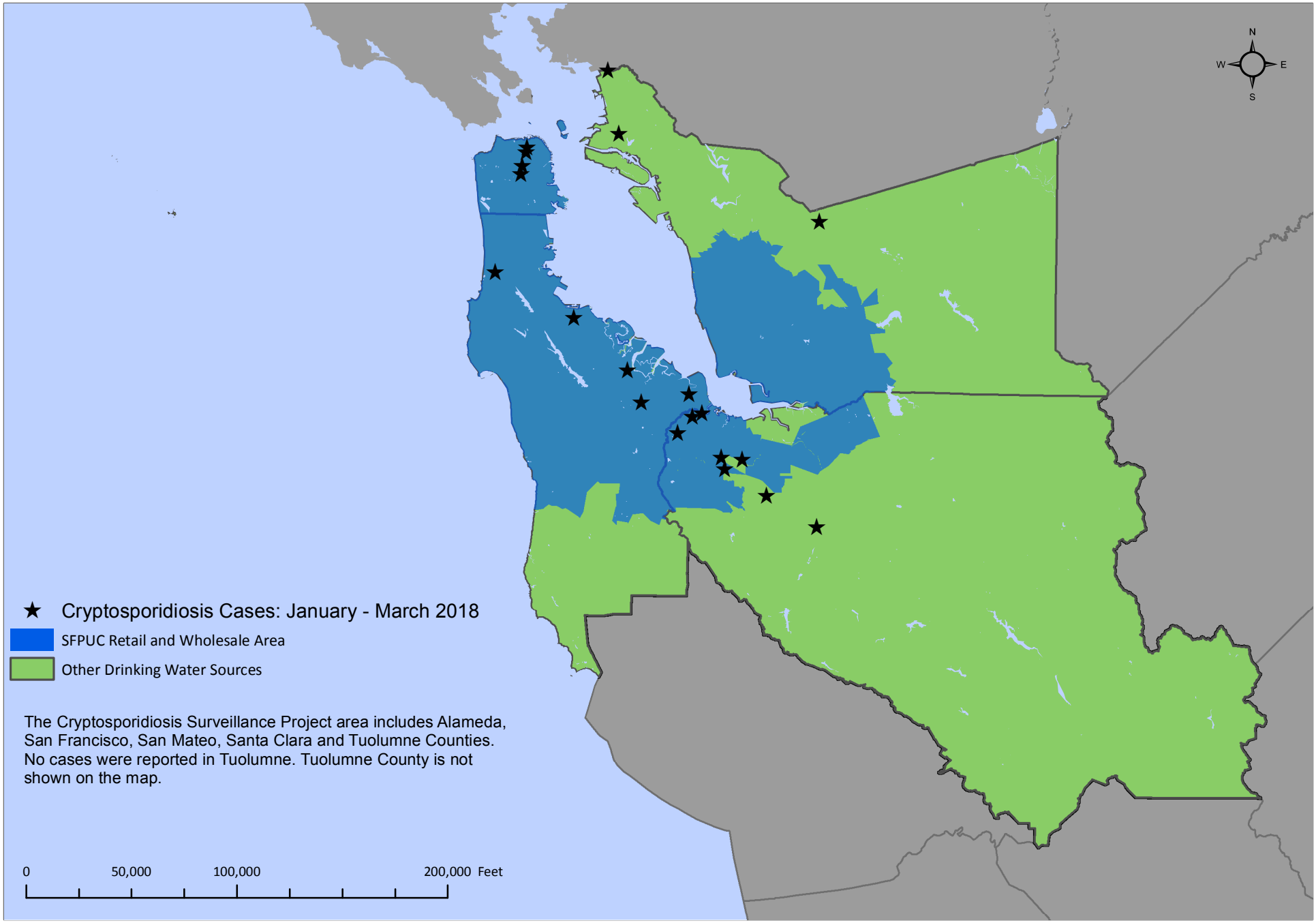
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, and Santa Clara Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Second Quarterly Report

2018

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

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Surveillance Summary: Second Quarter 2018:

During the second quarter of 2018, 40 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2017. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2018

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	10	50%	0.61
San Francisco	14	71%	1.59
San Mateo	8	63%	1.04
Santa Clara	8	63%	0.41
Tuolumne	0	NA	NA
Total	40	63%	0.75

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2017. Sacramento, California, December 2017.

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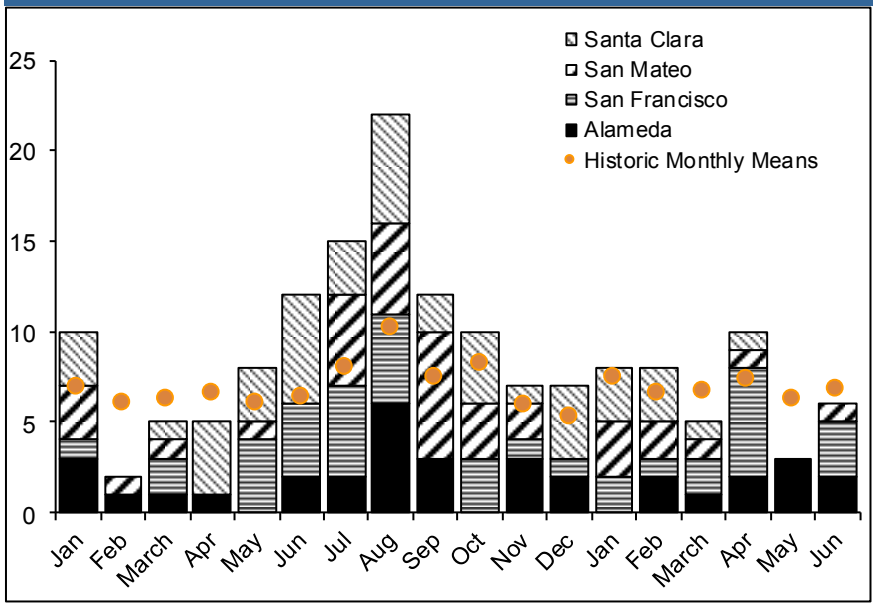
Figure 1: Cryptosporidiosis Cases by Month and County, January–June 2018



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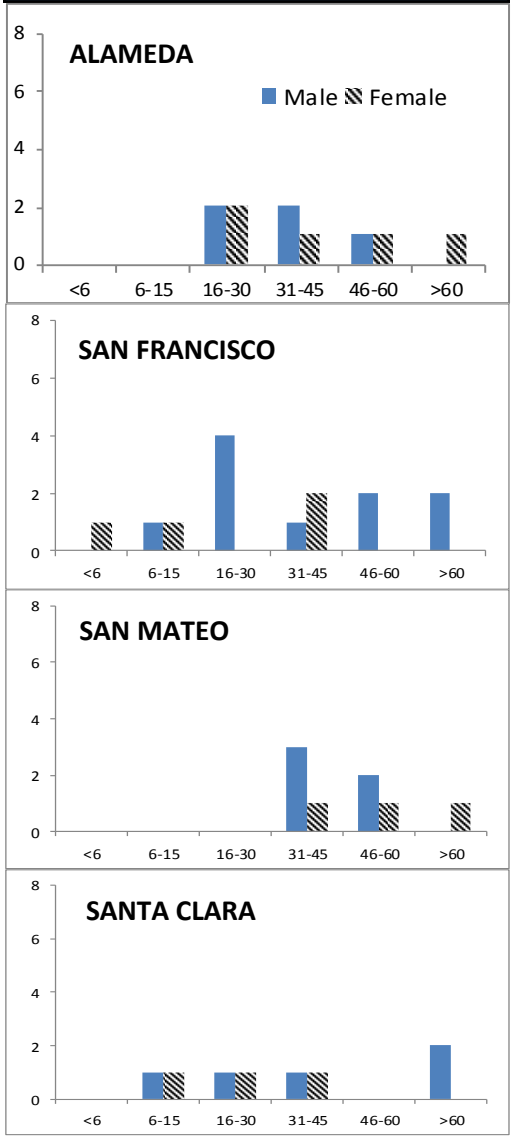
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– June 2018



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The Bay Area Cryptosporidiosis Surveillance Project

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San Francisco Water Power Sewer
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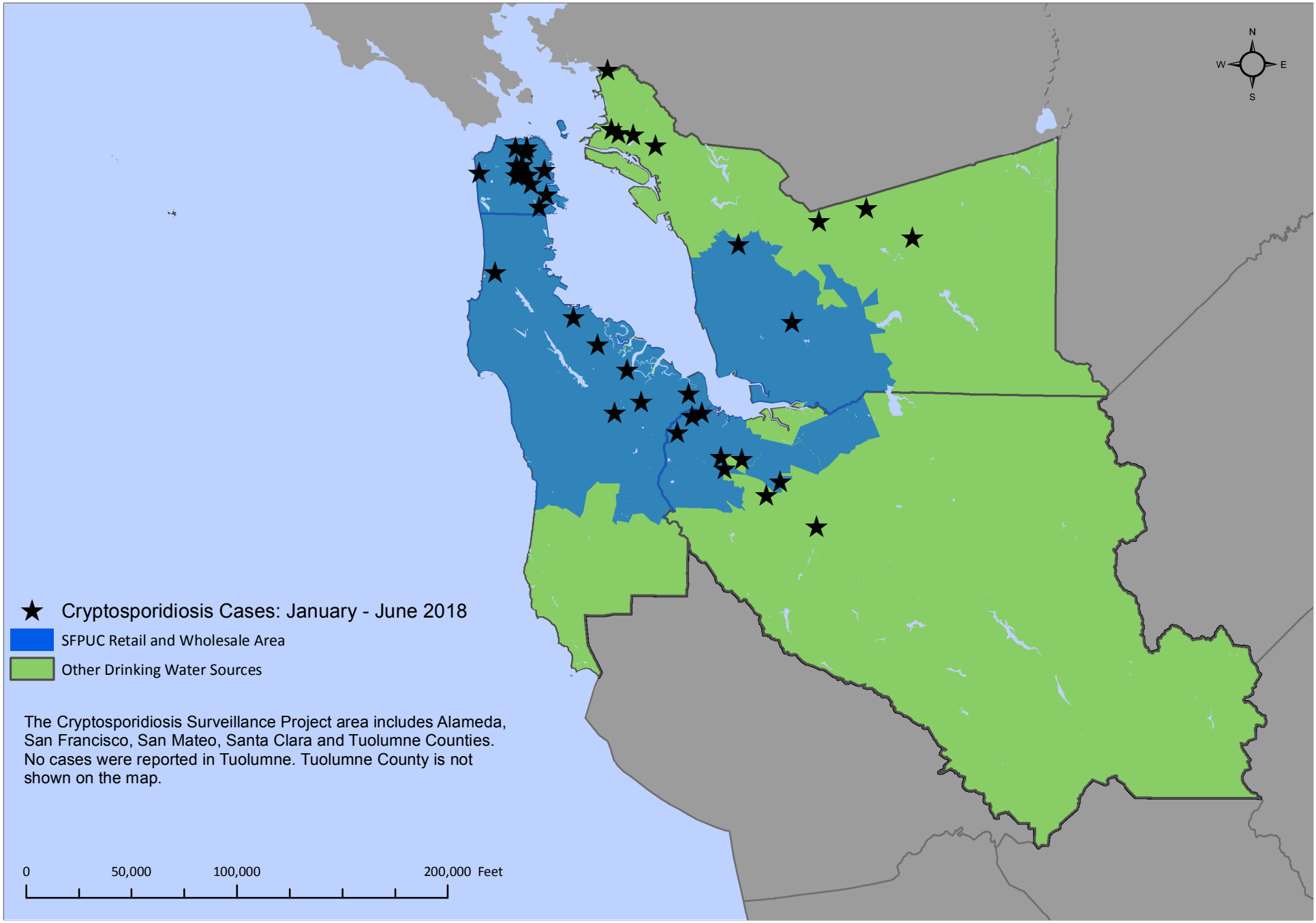

Cryptosporidiosis Surveillance Project

Third Quarterly Report

2018

POPULATION HEALTH DIVISION
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ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

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Surveillance Summary: Third Quarter 2018:

During the first, second and third quarters of 2018, 79 cryptosporidiosis cases were reported. A lower number of cases were reported than in the same period in 2017. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2018

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	17	53%	1.03
San Francisco	22	72%	2.50
San Mateo	14	50%	1.81
Santa Clara	26	50%	1.34
Tuolumne	0	NA	NA
Total	79	57%	1.49

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-2. California Population Estimates and component of change by year—July 1, 2010—2017. Sacramento, California, December 2017.

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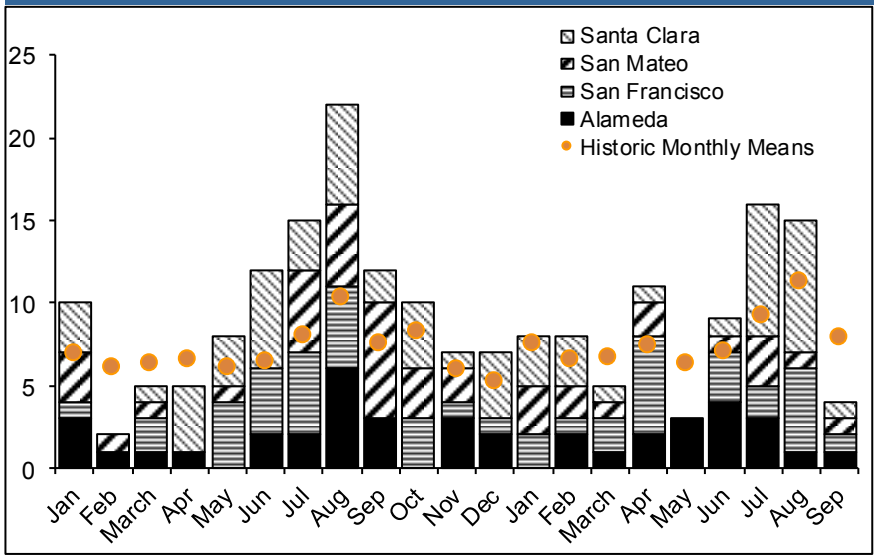
Figure 1: Cryptosporidiosis Cases by Month and County, January–September 2018



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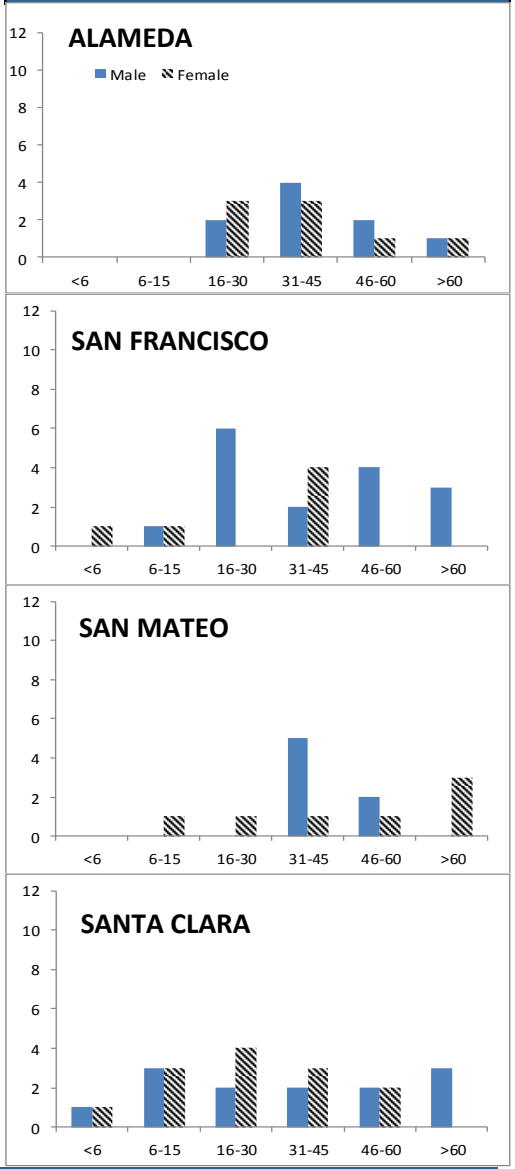
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–September 2018



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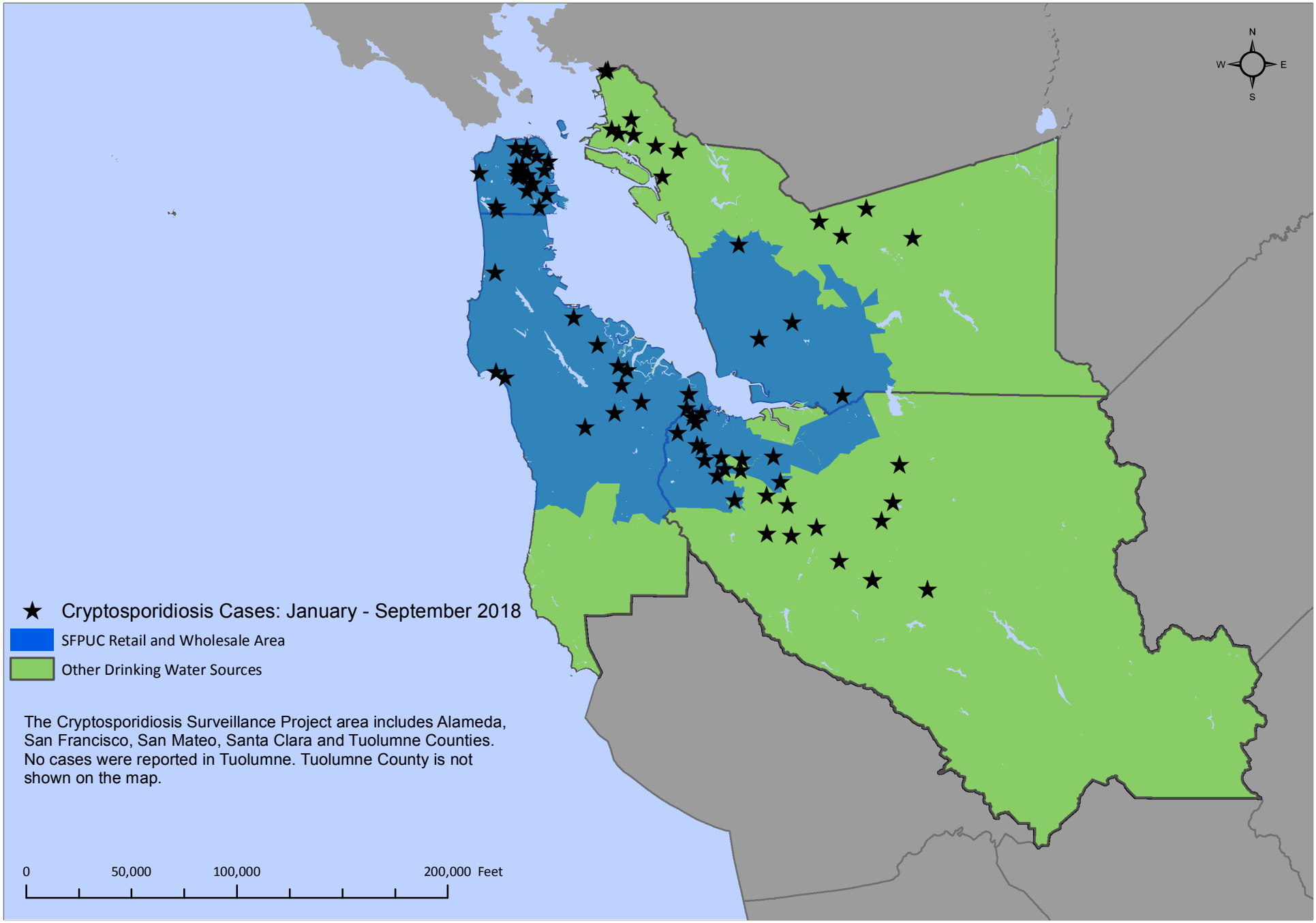


Cryptosporidiosis Surveillance Project Annual Report 2018

The Bay Area Cryptosporidiosis Surveillance Project (CSP) monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary

Fourth Quarter 2018: During the fourth quarter of 2018, 14 cases of cryptosporidiosis were reported in the project area. Fewer cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

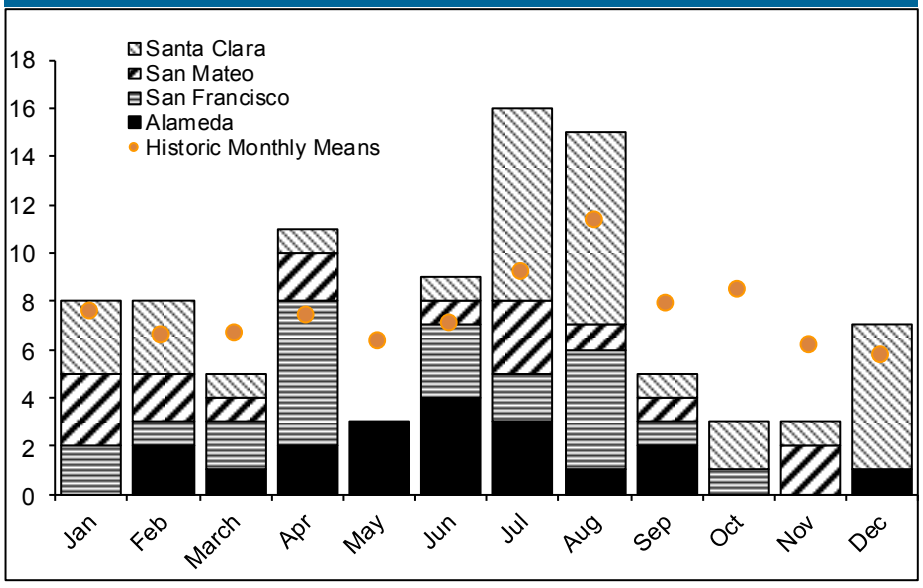
2018 Surveillance: In 2018 a total of 93 cases were reported. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 2.60 cryptosporidiosis cases per 100,000 residents in San Francisco county (Table 1). Compared to 2017, the incidence of cryptosporidiosis decreased for Alameda, San Francisco, San Mateo and Santa Clara counties. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2018

County	N	Cumulative Incidence per 100,000‡
Alameda	19	1.14
San Francisco	23	2.60
San Mateo	16	2.07
Santa Clara	35	1.79
Tuolumne	0	NA
Total	93	1.74

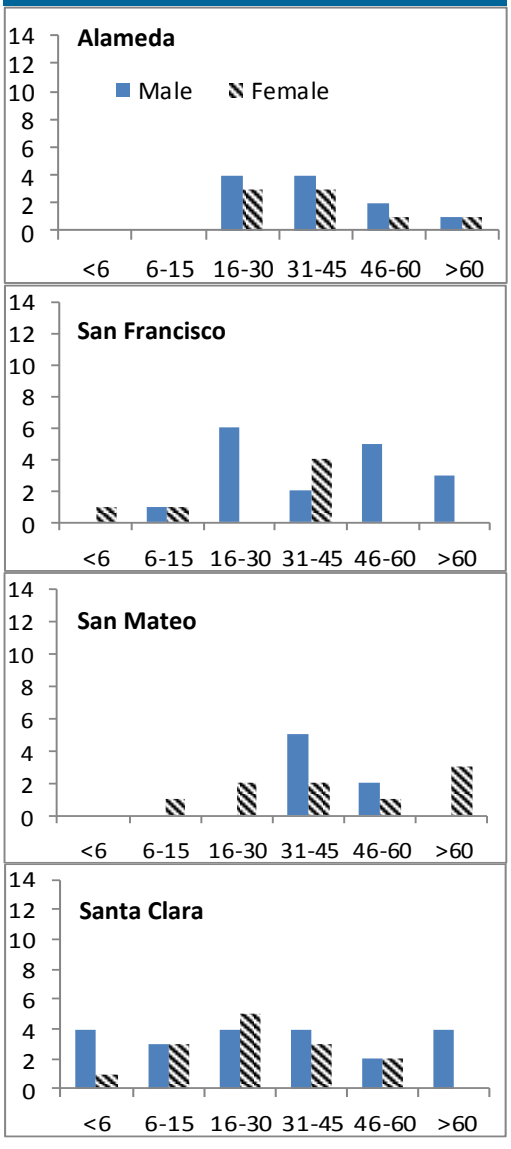
‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2017 and 2018. Sacramento, California, May 2018.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2018 - December 2018



No cases reported in Tuolumne County.
Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010-2014.
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–December 2018



Cryptosporidiosis Case Demographics and Risk Factors

In 2018, 39 (42%) of cryptosporidiosis cases were white and 56 (60%) were male. Data on race/ethnicity were not collected for 20 (22%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2018, 9 (10%) reported contact with a suspected case during the incubation period. Twenty-seven (29%) cases over age 15 reported sexual contact during the incubation period; twelve (13%) adult male cases reported MSM activity. Sixteen (17%) cases reported compromised immune status. Thirty-four (37%) cases reported contact with animals during the incubation period; two (2%) had contact with farm or non-domesticated animals. Twenty-nine (31%) cases reported foreign travel. Thirty-nine (42%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2018

	N	(%) by County
Alameda		
Male	11	(58%)
White	5	(26%)
Black	1	(5%)
Asian	4	(21%)
Hispanic	6	(32%)
Unknown/Missing	3	(16%)
San Francisco		
Male	17	(74%)
White	9	(39%)
Asian	1	(4%)
Hispanic	5	(22%)
Other	1	(4%)
Unknown/Missing	7	(30%)
San Mateo		
Male	7	(44%)
White	7	(44%)
Asian	1	(6%)
Hispanic	4	(25%)
Unknown/Missing	4	(25%)
Santa Clara		
Male	21	(60%)
White	18	(51%)
Asian	6	(17%)
Hispanic	5	(14%)
Unknown/Missing	6	(17%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2018

Risk Factor	County	(%)
Contact with Suspect Case	Alameda	(11%)
	San Mateo	(13%)
	Santa Clara	(14%)
Daycare	Alameda	(11%)
	San Francisco	(9%)
	San Mateo	(13%)
	Santa Clara	(11%)
Sexual Activity*	Alameda	(37%)
	San Francisco	(43%)
	San Mateo	(6%)
	Santa Clara	(26%)
MSM**	Alameda	(16%)
	San Francisco	(30%)
	Santa Clara	(6%)
Contact with Farm or Non-Domesticated Animals	San Francisco	(6%)
	Santa Clara	(3%)
Immune Suppression	Alameda	(5%)
	San Francisco	(35%)
	San Mateo	(13%)
	Santa Clara	(40%)
Foreign Travel	Alameda	(32%)
	San Francisco	(17%)
	San Mateo	(31%)
	Santa Clara	(40%)
Recreational Water Contact ***	Alameda	(47%)
	San Francisco	(30%)
	San Mateo	(31%)
	Santa Clara	(51%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2018, CSP received case notification of positive *Cryptosporidium* laboratory results for 76% of the 93 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 72% of cases in 2018. Interviews were completed within one business day of notification for 27% of all interviewed cases.

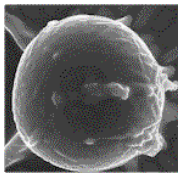


Table 4: Median Days between Specimen Collection and Report to CSP, 2018

		N	Median	Min	Max
2018		93	4	1	101
Quarter					
	Quarter 1	21	4	1	31
	Quarter 2	23	11	1	101
	Quarter 3	36	3	1	18
	Quarter 4	13	3	1	6
Informant					
	Laboratory	22	5	1	25
	County Health Department	71	3	1	101
County					
	Alameda	19	12	2	101
	San Francisco	23	5	1	25
	San Mateo	16	4	1	92
	Santa Clara	35	2	1	25

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2018

County	Informant/Quarter	N	Median	Min	Max
	Alameda County Public Health Department	19	12	2	101
Alameda	Quarter 1	3	21	3	31
	Quarter 2	9	17	3	101
	Quarter 3	6	7	2	18
	Quarter 4	1	2	2	2
	Laboratory	23	5	1	25
San Francisco	Quarter 1	5	4	1	14
	Quarter 2	9	5	1	25
	Quarter 3	8	4	1	17
	Quarter 4	1	6	6	6
	San Mateo County Health Services Agency	16	4	1	92
San Mateo	Quarter 1	6	4	1	7
	Quarter 2	3	19	5	92
	Quarter 3	5	2	1	10
	Quarter 4	2	2	1	3
	Santa Clara County Public Health Department	35	2	1	25
Santa Clara	Quarter 1	7	3	1	25
	Quarter 2	2	8	1	14
	Quarter 3	17	2	1	6
	Quarter 4	9	1	1	5

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Cryptosporidiosis Surveillance Project

First Quarterly Report

2019

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Surveillance Summary: First Quarter 2019:

During the first quarter of 2019, 19 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2018. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–March 2019

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	4	75%	0.24
San Francisco	4	75%	0.45
San Mateo	4	50%	0.52
Santa Clara	7	71%	0.36
Tuolumne	0	NA	NA
Total	19	68%	0.36

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2018 and 2019. Sacramento, California, May 2019.

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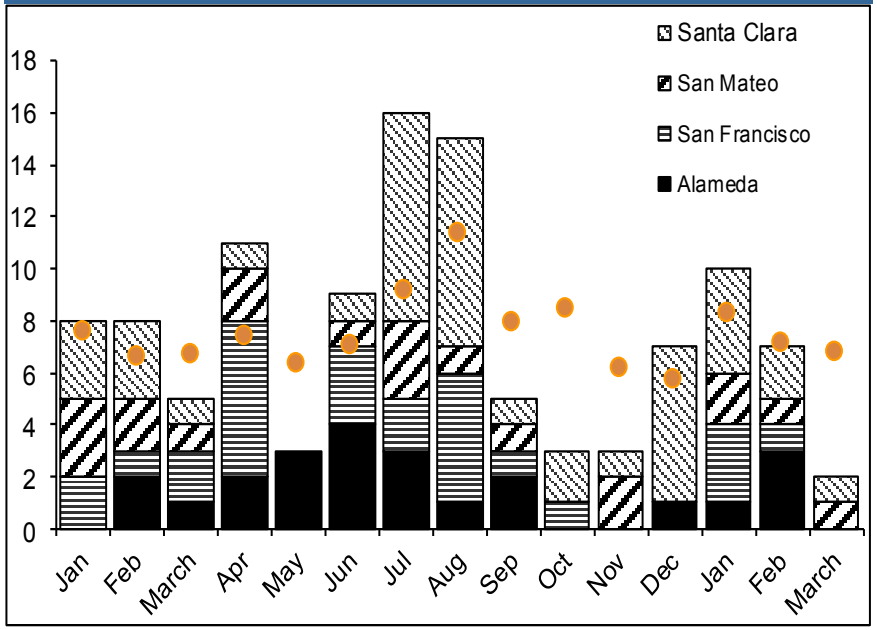

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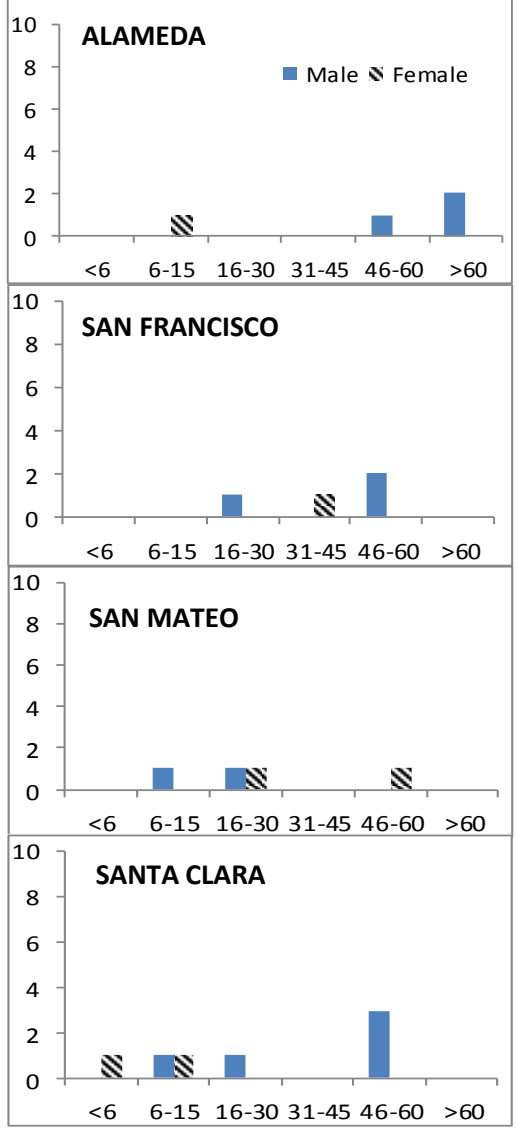
Figure 2: Case Counts by County, Age and Sex, January– March 2019



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ENVIRONMENTAL HEALTH

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San Francisco Water Power Sewer
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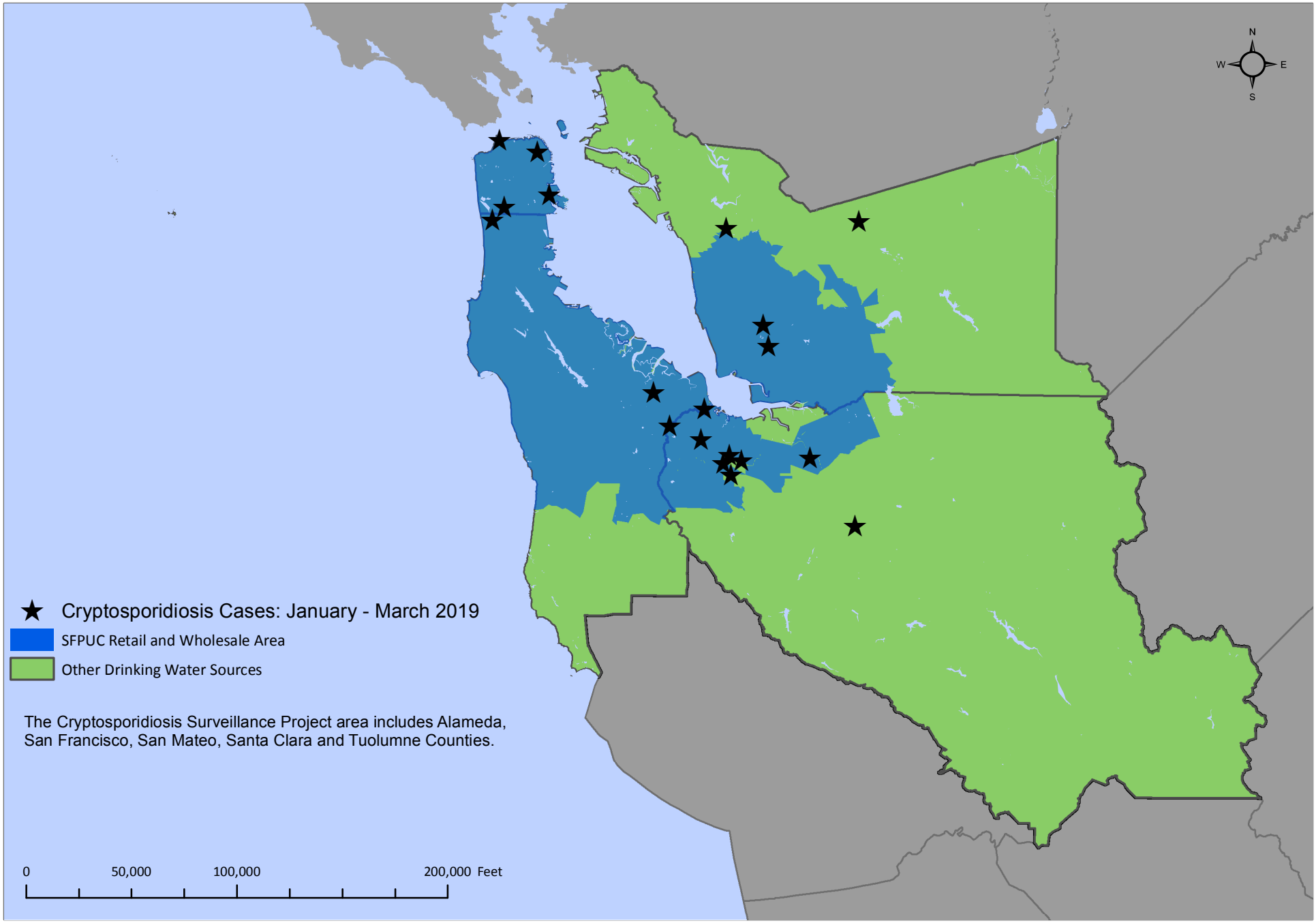

Cryptosporidiosis Surveillance Project

Second Quarterly Report

2019

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Surveillance Summary: Second Quarter 2019:

During the second quarter of 2019, 44 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2018. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2019

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	7	71%	0.42
San Francisco	5	80%	0.57
San Mateo	12	42%	1.55
Santa Clara	19	63%	0.97
Tuolumne	1	N/A	1.83
Total	44	59%	0.82

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2018 and 2019. Sacramento, California, May 2019.

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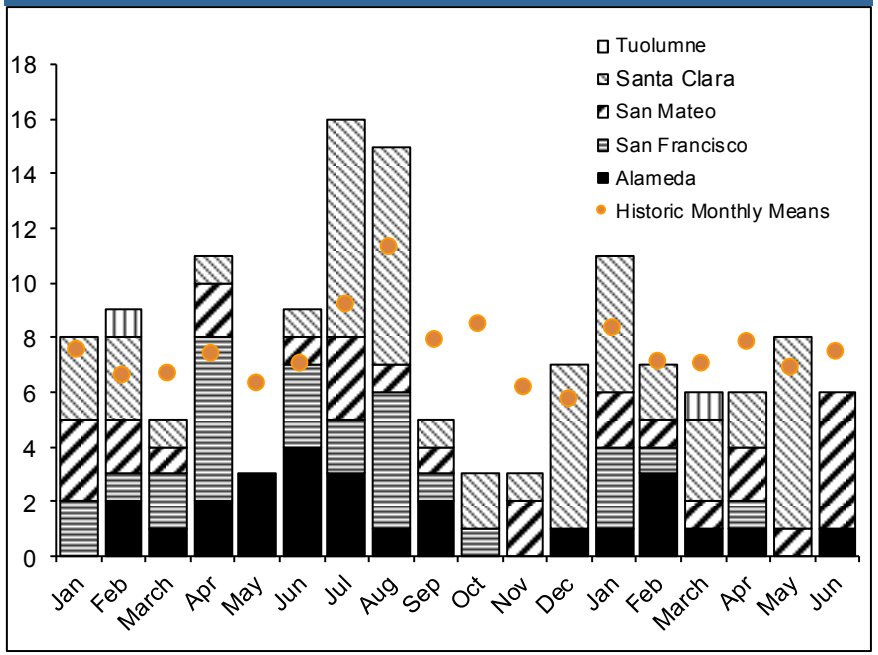
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through June 2019.

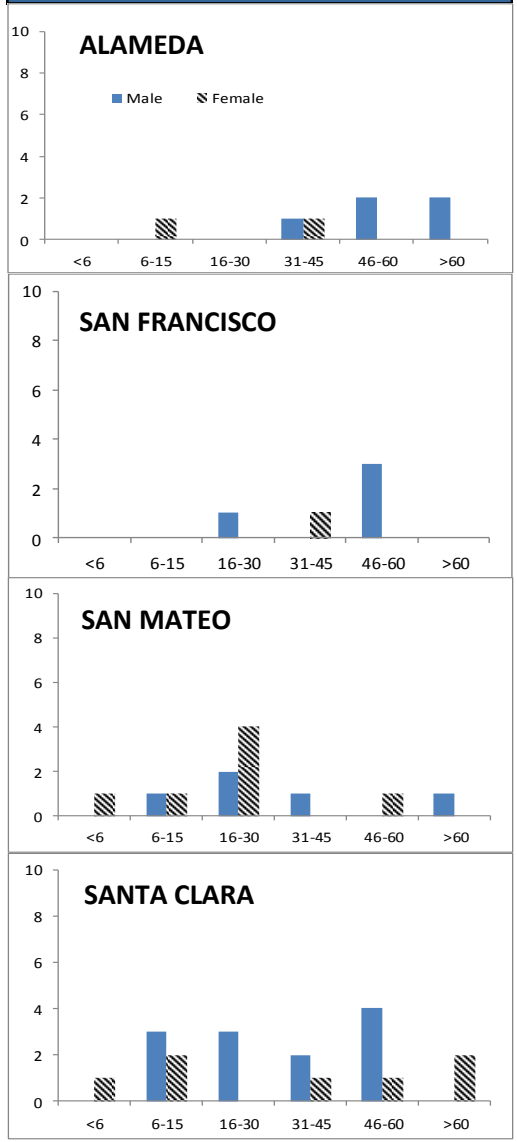
Figure 1: Cryptosporidiosis Cases by Month and County, January–June 2019



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts (>1) by County, Age and Sex, January– June 2019



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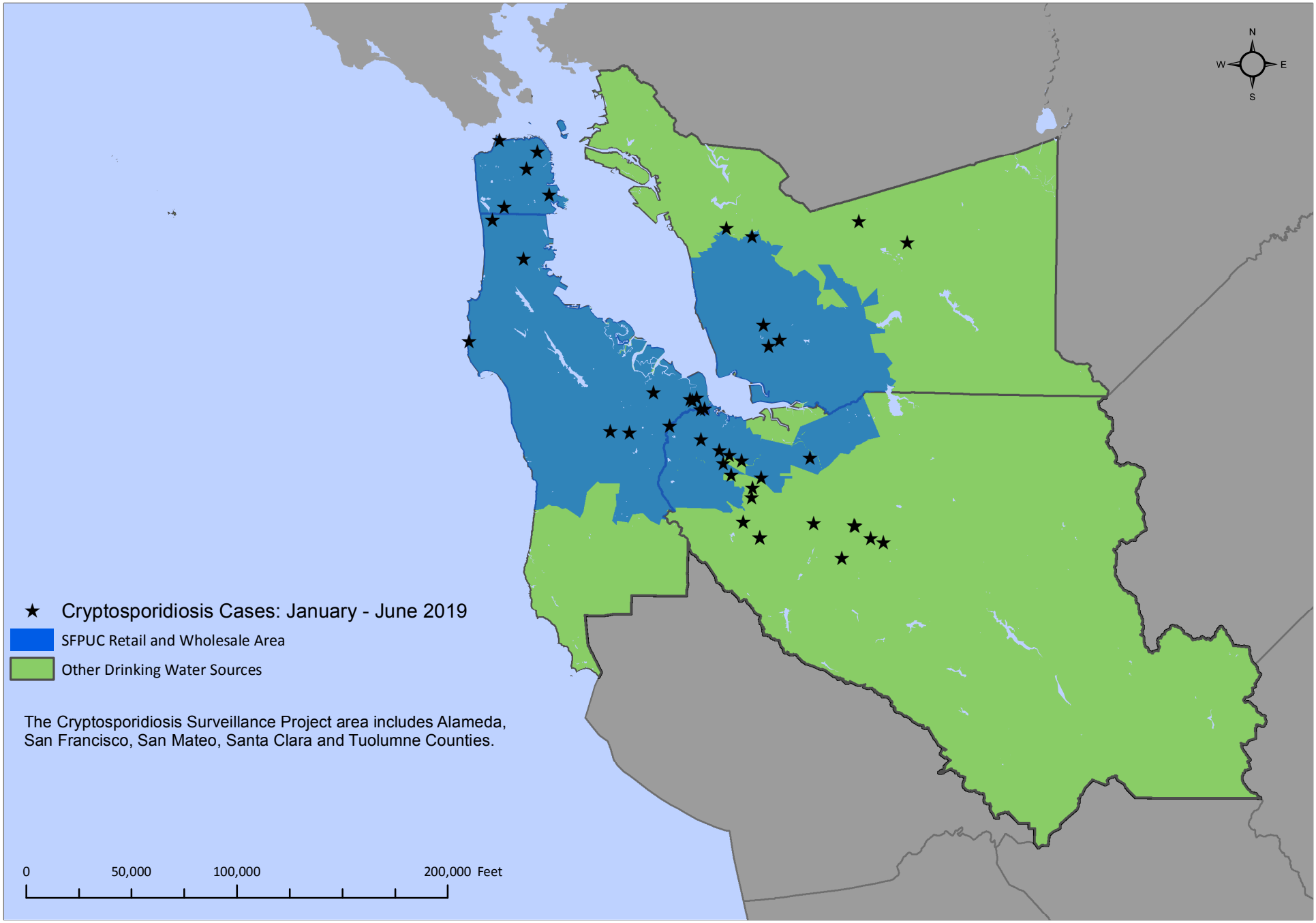
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara Counties, and Tuolumne Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Third Quarterly Report

2019

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Third Quarter 2019:

During the third quarter of 2019, 40 cryptosporidiosis cases were reported. This is a slightly higher number of cases than reported in the same period in 2018. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2019

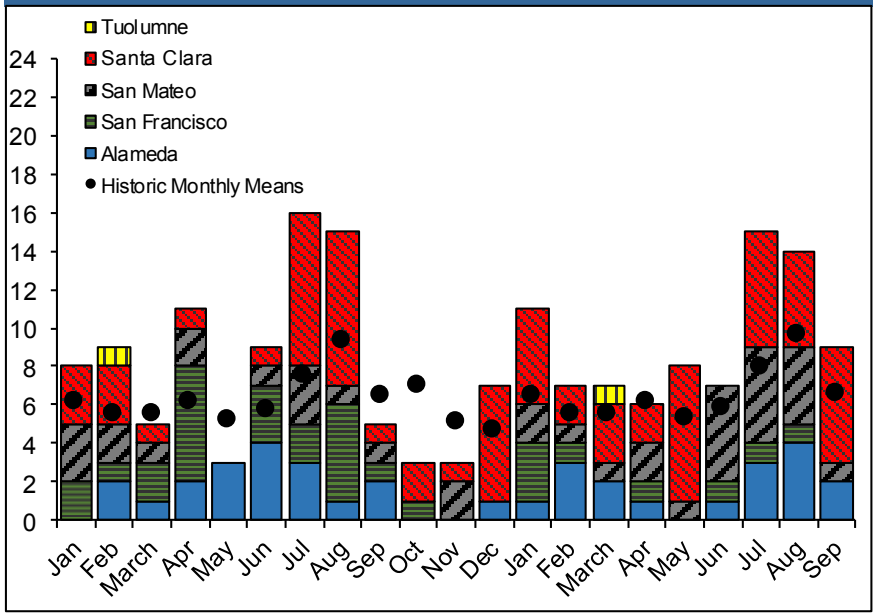
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	17	71%	1.02
San Francisco	8	63%	0.91
San Mateo	22	41%	2.84
Santa Clara	36	61%	1.84
Tuolumne	1	—-	1.83
Total	84	57%	1.57

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2018 and 2019. Sacramento, California, May 2019.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2019.
- Figure 1: Monthly case totals by county for January 2018 through September 2019.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through September 2019.

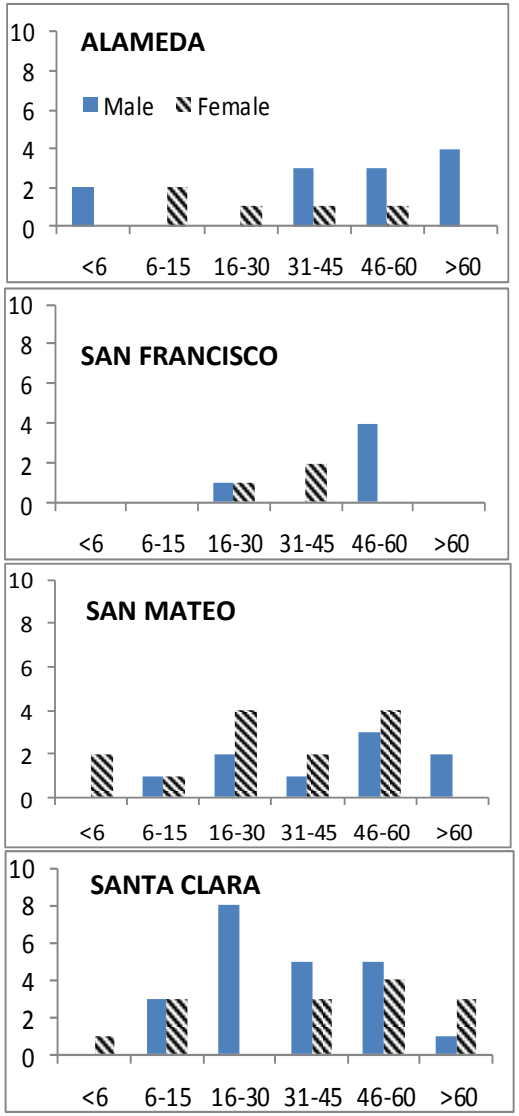
Figure 1: Cryptosporidiosis Cases by Month and County, January–September 2019



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts (>1) by County, Age and Sex, January– September 2019



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The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara Counties, and Tuolumne Counties

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
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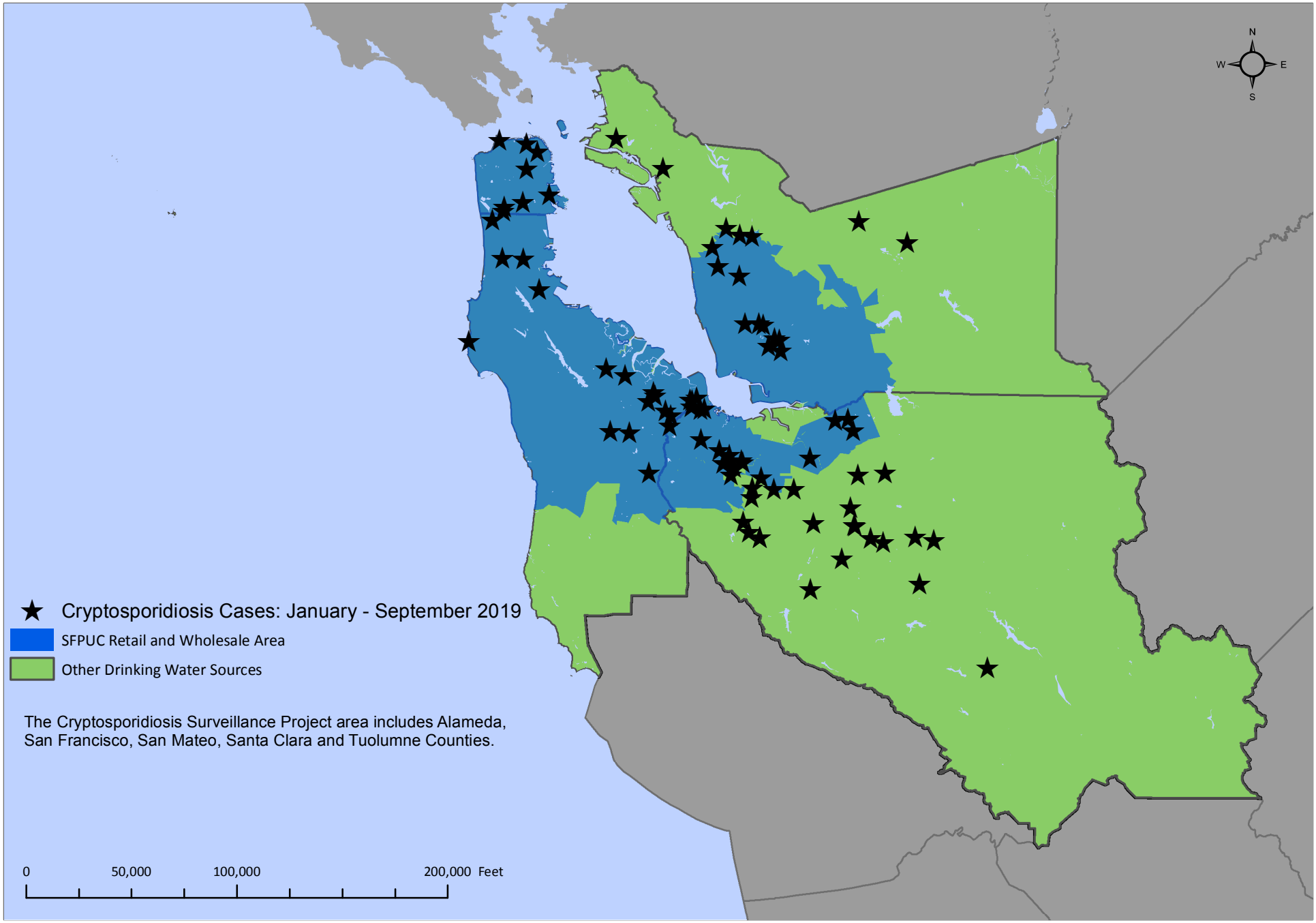


Cryptosporidiosis Surveillance Project Annual Report 2019

The Bay Area Cryptosporidiosis Surveillance Project (CSP) monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary

Fourth Quarter 2019: During the fourth quarter of 2019, 34 cases of cryptosporidiosis were reported in the project area. More cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

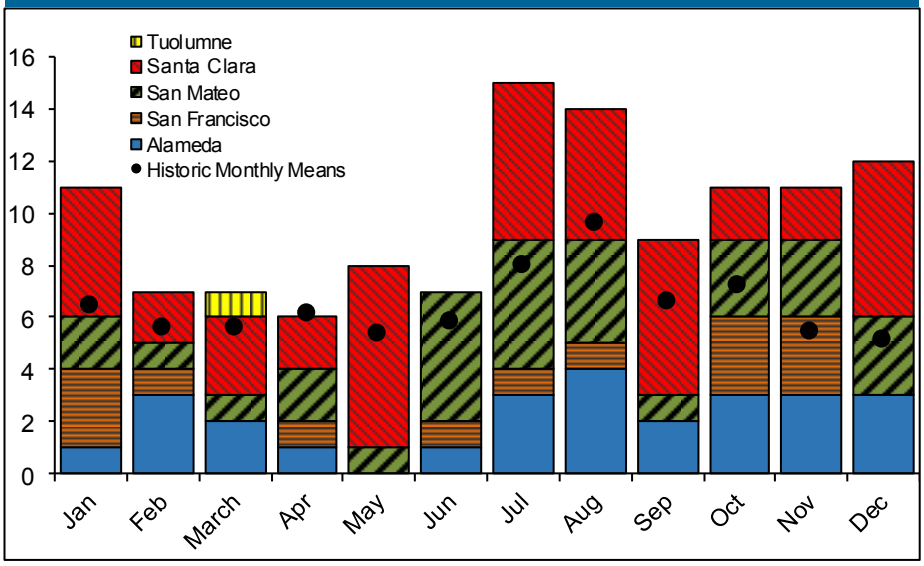
2019 Surveillance: In 2019 a total of 118 cases were reported. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 2.60 cryptosporidiosis cases per 100,000 residents in San Francisco county (Table 1). Compared to 2018, the incidence of cryptosporidiosis decreased for San Francisco and increased for Alameda, San Mateo, Santa Clara and Tuolumne counties. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2019

County	N	Cumulative Incidence per 100,000‡
Alameda	26	1.56
San Francisco	14	1.58
San Mateo	31	4.00
Santa Clara	46	2.35
Tuolumne	1	1.83
Total	118	2.21

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2018 and 2019. Sacramento, California, May 2019.

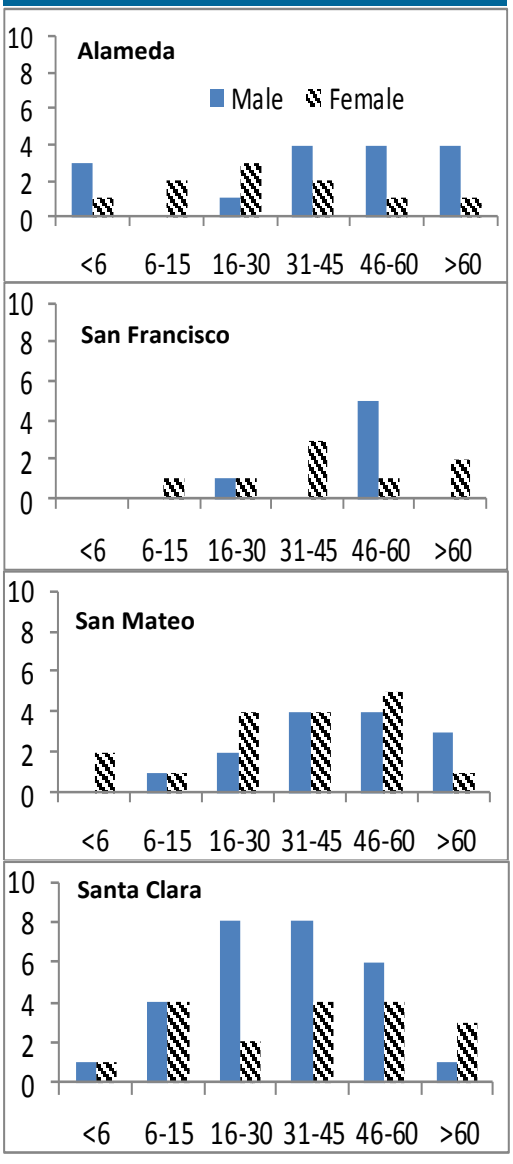
Figure 1: Cryptosporidiosis Cases by Month and County, January 2019—December 2019



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts (>1) by County, Age and Sex, January–December 2019



Cryptosporidiosis Case Demographics and Risk Factors

In 2019, 46 (39%) of cryptosporidiosis cases were white and 64 (54%) were male. Data on race/ethnicity were not collected for 22 (19%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2019, 12 (10%) reported contact with a suspected case during the incubation period. Twenty-four (25%) cases over age 15 reported sexual contact during the incubation period; three (3%) adult male cases reported MSM activity. Twenty-two (19%) cases reported compromised immune status. Forty-two (36%) cases reported contact with animals during the incubation period; six (5%) had contact with farm or non-domesticated animals. Forty-three (37%) cases reported foreign travel. Thirty-one (26%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2019

	N	(%) by County
Alameda		
Male	16	(62%)
White	11	(42%)
Black	2	(8%)
Asian	5	(19%)
Hispanic	4	(15%)
Unknown/Missing	4	(15%)
San Francisco		
Male	6	(43%)
White	5	(36%)
Black	1	(7%)
Asian	3	(21%)
Hispanic	2	(14%)
Unknown/Missing	3	(21%)
San Mateo		
Male	14	(45%)
White	14	(45%)
Asian	2	(6%)
Hispanic	10	(32%)
Native American/Alaskan	1	(3%)
Unknown/Missing	4	(13%)
Santa Clara		
Male	28	(61%)
White	15	(32%)
Black	2	(4%)
Asian	11	(24%)
Hispanic	7	(15%)
Unknown/Missing	11	(24%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2019

Risk Factor	County	(%)
Contact with Suspect Case	Alameda	(4%)
	San Francisco	(7%)
	San Mateo	(23%)
	Santa Clara	(7%)
Daycare	Alameda	(4%)
	San Francisco	(7%)
	Santa Clara	(7%)
Sexual Activity*	Alameda	(12%)
	San Francisco	(36%)
	San Mateo	(29%)
	Santa Clara	(15%)
MSM**	San Francisco	(14%)
	Santa Clara	(2%)
Contact with Farm or Non-Domesticated Animals	Alameda	(8%)
	San Francisco	(7%)
	Santa Clara	(4%)
Immune Suppression	Alameda	(31%)
	San Francisco	(29%)
	San Mateo	(19%)
	Santa Clara	(9%)
Foreign Travel	Alameda	(27%)
	San Francisco	(36%)
	San Mateo	(48%)
	Santa Clara	(35%)
Recreational Water Contact ***	Alameda	(27%)
	San Francisco	(21%)
	San Mateo	(39%)
	Santa Clara	(20%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2019, CSP received case notification of positive *Cryptosporidium* laboratory results for 61% of the 118 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 69% of cases in 2019. Interviews were completed within one business day of notification for 45% of all interviewed cases.

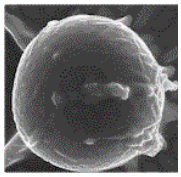


Table 4: Median Days between Specimen Collection and Report to CSP, 2019

		N	Median	Min	Max
2019		118	3	1	193
Quarter					
	Quarter 1	25	3	1	193
	Quarter 2	21	4	1	77
	Quarter 3	38	3	1	28
	Quarter 4	34	3	1	73
County					
	Alameda	26	2	1	193
	San Francisco	14	6	1	77
	San Mateo	31	2	1	9
	Santa Clara	46	4	1	87
	Tuolumne	1	56	56	56

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2019

County	Informant/Quarter	N	Median	Min	Max
	Alameda County Public Health Department	26	2	1	193
Alameda	Quarter 1	6	3	1	193
	Quarter 2	2	6	2	9
	Quarter 3	9	2	1	28
	Quarter 4	9	3	1	5
	San Francisco Communicable Disease Control	14	6	1	77
San Francisco	Quarter 1	4	4	1	27
	Quarter 2	2	47	16	77
	Quarter 3	2	9	5	12
	Quarter 4	6	3	2	73
	San Mateo County Health Services Agency	31	2	1	9
San Mateo	Quarter 1	4	1	1	4
	Quarter 2	8	3	1	6
	Quarter 3	10	2	1	9
	Quarter 4	9	3	1	8
	Santa Clara County Public Health Department	46	4	1	87
Santa Clara	Quarter 1	10	4	1	87
	Quarter 2	9	4	1	9
	Quarter 3	17	4	1	16
	Quarter 4	10	3	1	6

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Cryptosporidiosis Surveillance Project

First Quarterly Report

2020

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

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Surveillance Summary: First Quarter 2020:

During the first quarter of 2020, 23 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2019. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–March 2020

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	2	50%	0.12
San Francisco	5	80%	0.56
San Mateo	6	50%	0.76
Santa Clara	10	60%	0.51
Tuolumne	0	NA	NA
Total	23	61%	0.43

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2019 and 2020. Sacramento, California, May 2020.

Graphics and Tables:

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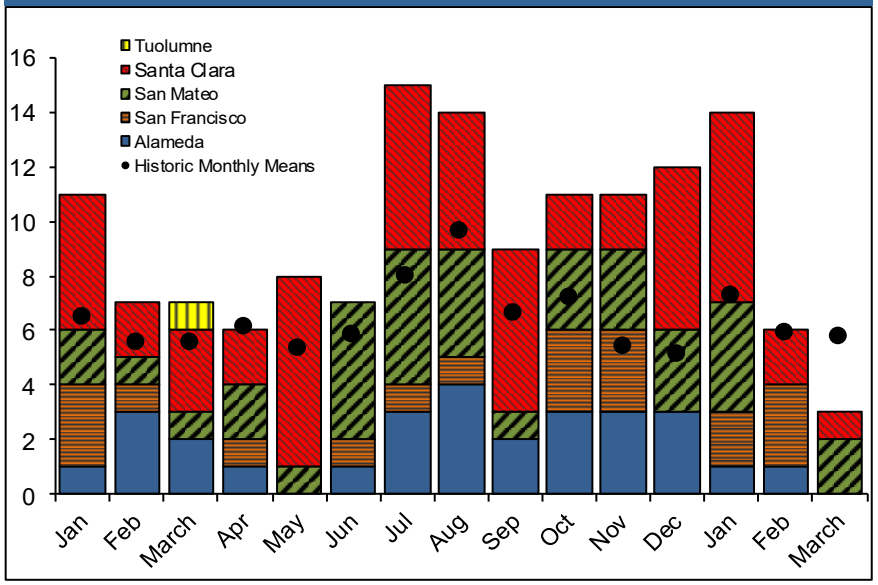
Figure 1: Cryptosporidiosis Cases by Month and County, January–March 2020



Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

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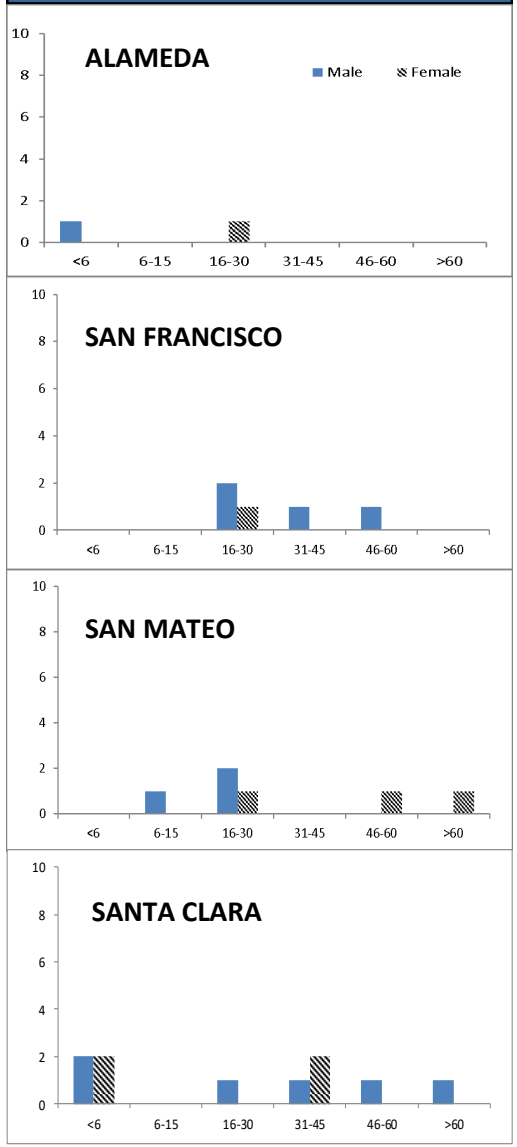
Figure 2: Case Counts by County, Age and Sex, January– March 2020



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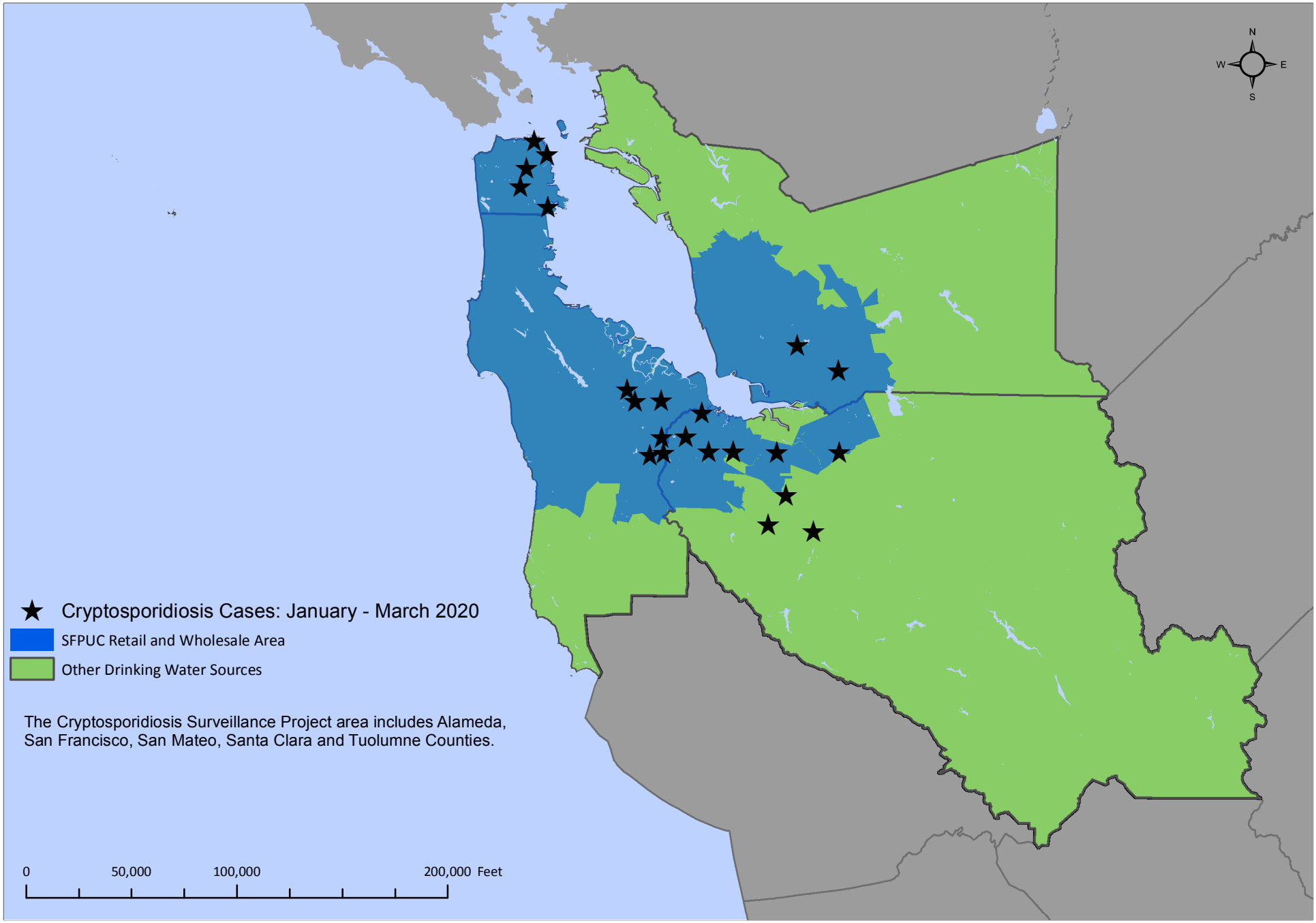
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara Counties, and Tuolumne Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Second Quarterly Report

2020

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

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Surveillance Summary: Second Quarter 2020:

During the second quarter of 2020, 29 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2019. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2020

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	5	60%	0.30
San Francisco	6	83%	0.67
San Mateo	7	43%	0.91
Santa Clara	11	64%	0.56
Tuolumne	0	N/A	N/A
Total	29	62%	0.54

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2019 and 2020. Sacramento, California, May 2020.

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Figure 1: Cryptosporidiosis Cases by Month and County, January–June 2020

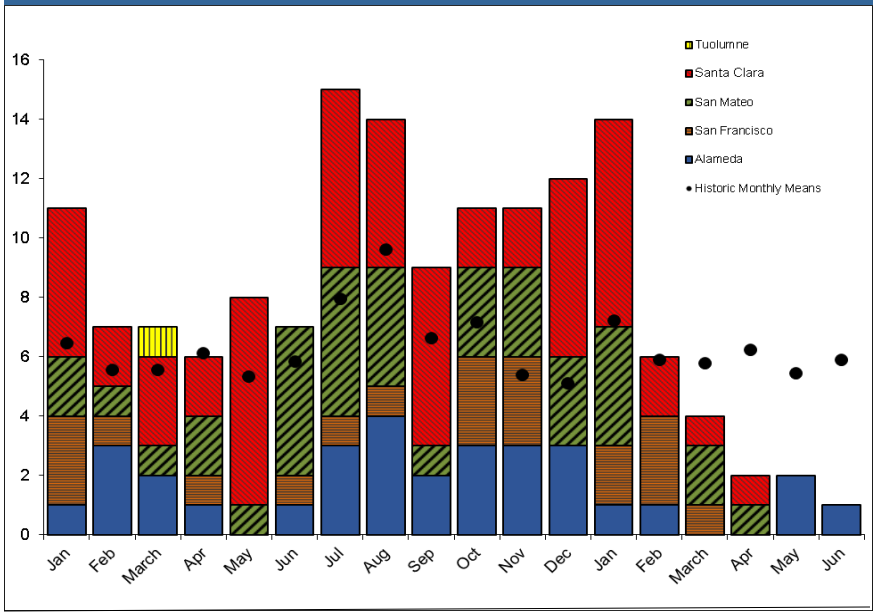

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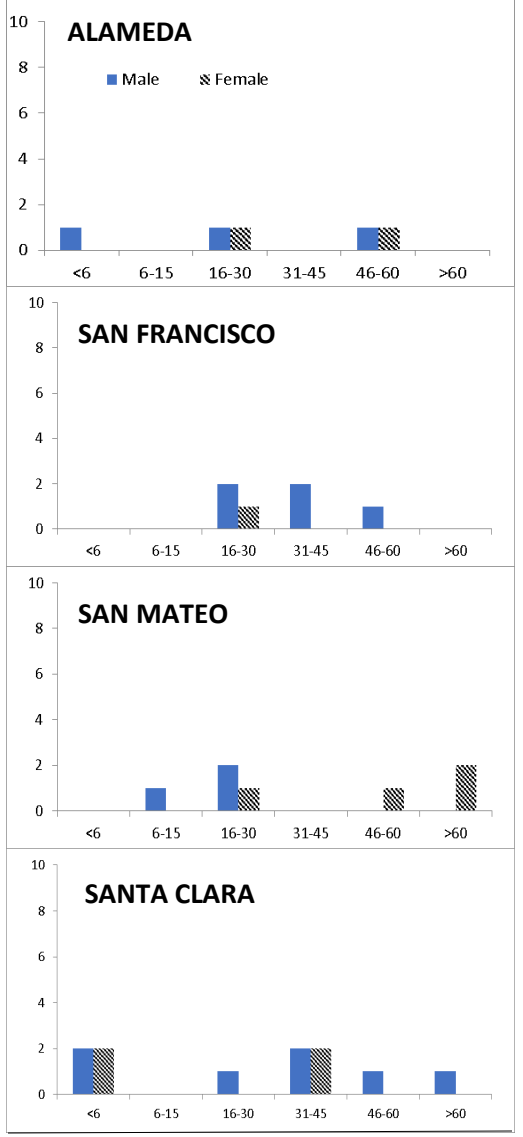
Figure 2: Case Counts (>1) by County, Age and Sex, January– June 2020



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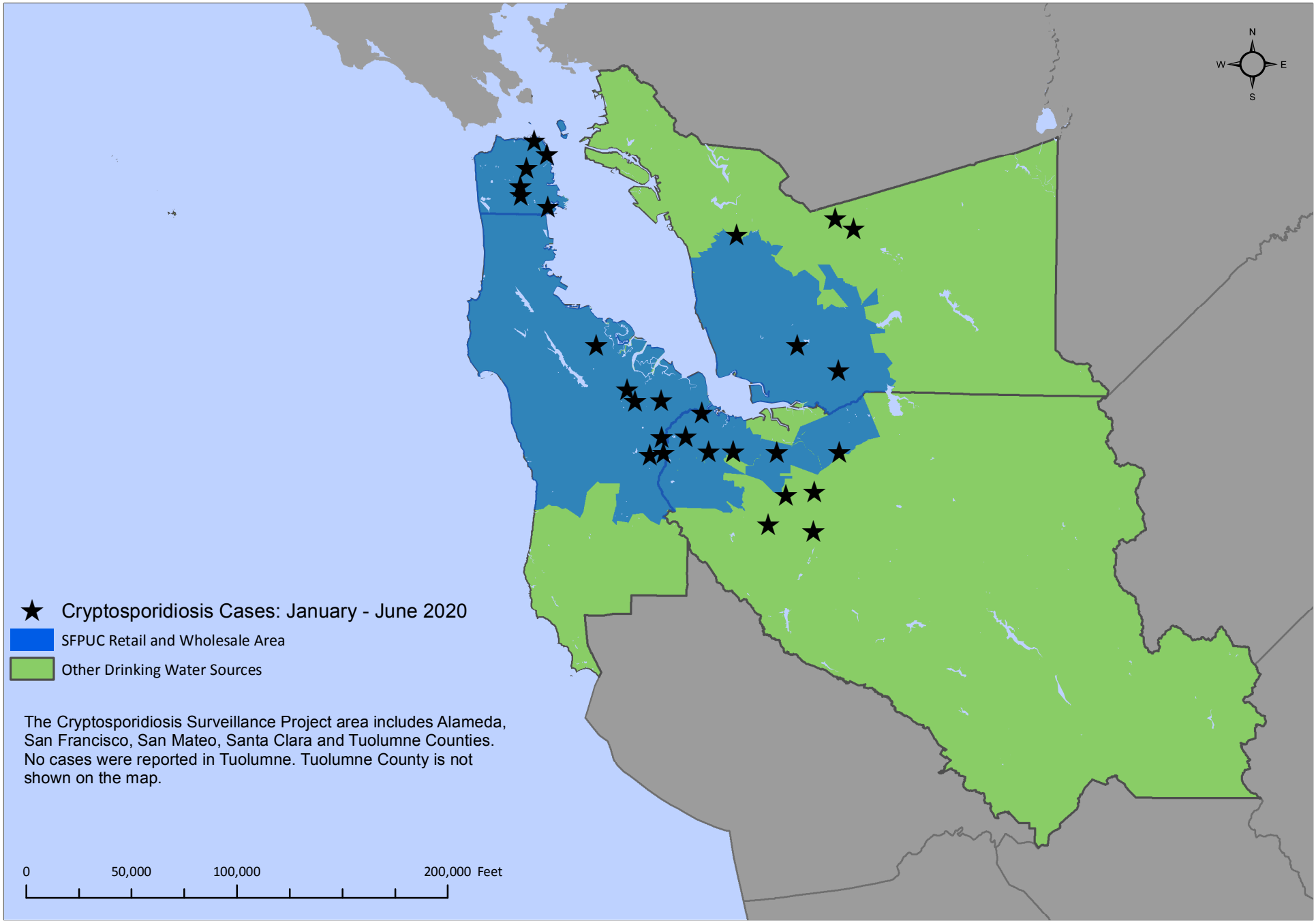
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Third Quarterly Report

2020

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SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

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Surveillance Summary: Third Quarter 2020:

During the third quarter of 2020, 8 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2019. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2020

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	5	60%	0.30
San Francisco	7	71%	0.78
San Mateo	9	33%	1.16
Santa Clara	16	44%	0.82
Tuolumne	0	N/A	N/A
Total	37	62%	0.69

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2019 and 2020. Sacramento, California, May 2020.

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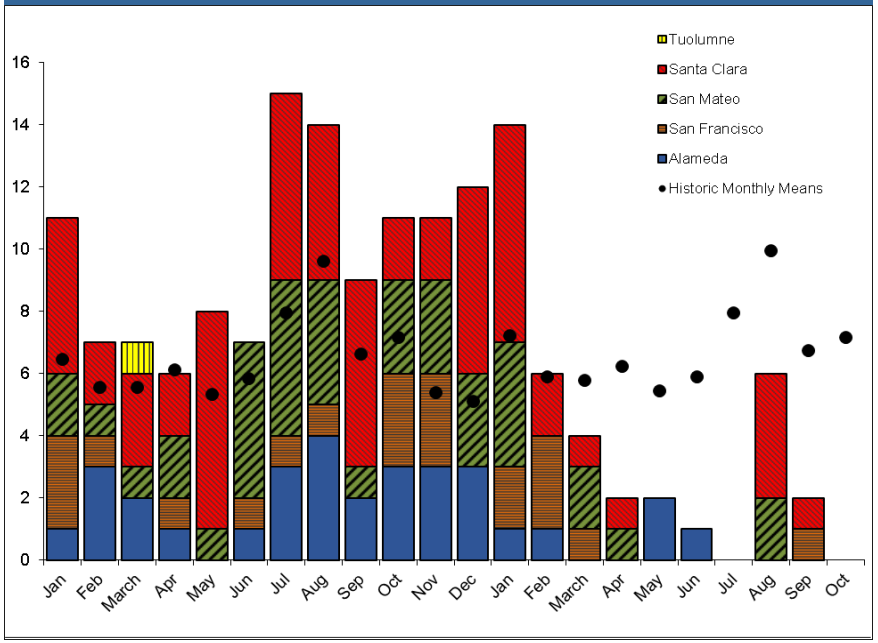

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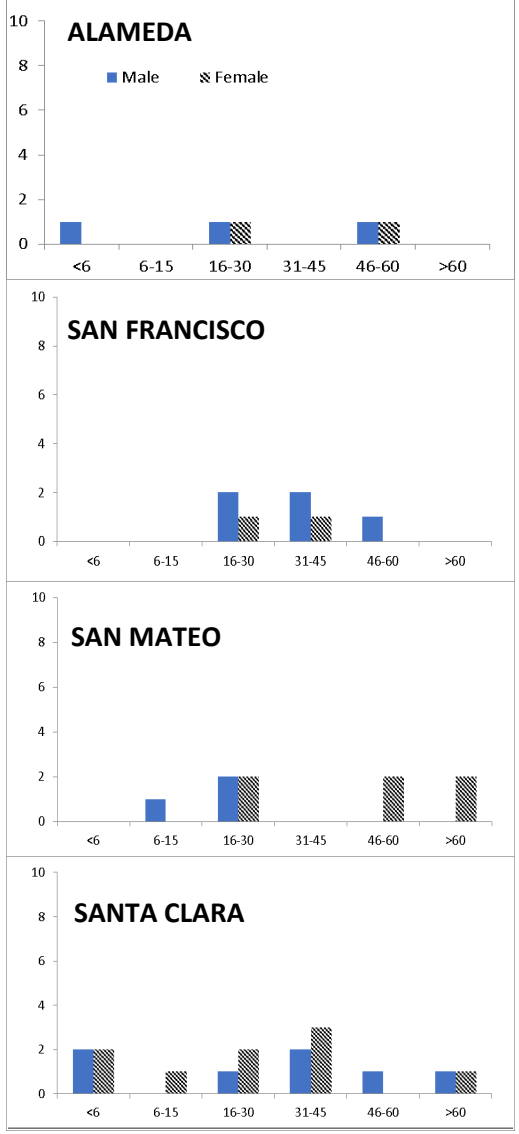
Figure 2: Case Counts (>1) by County, Age and Sex, January – September 2020



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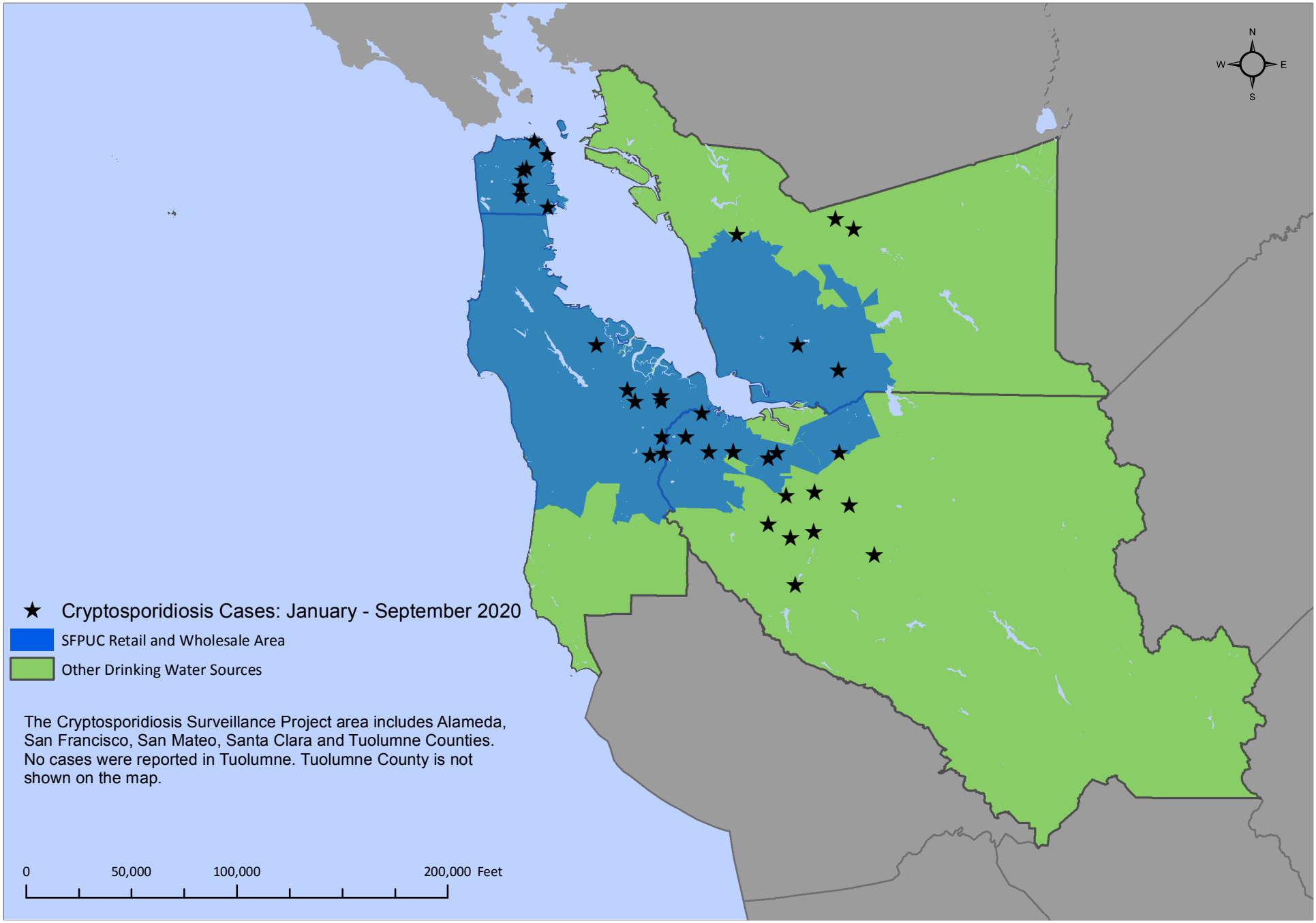


Cryptosporidiosis Surveillance Project Annual Report 2020

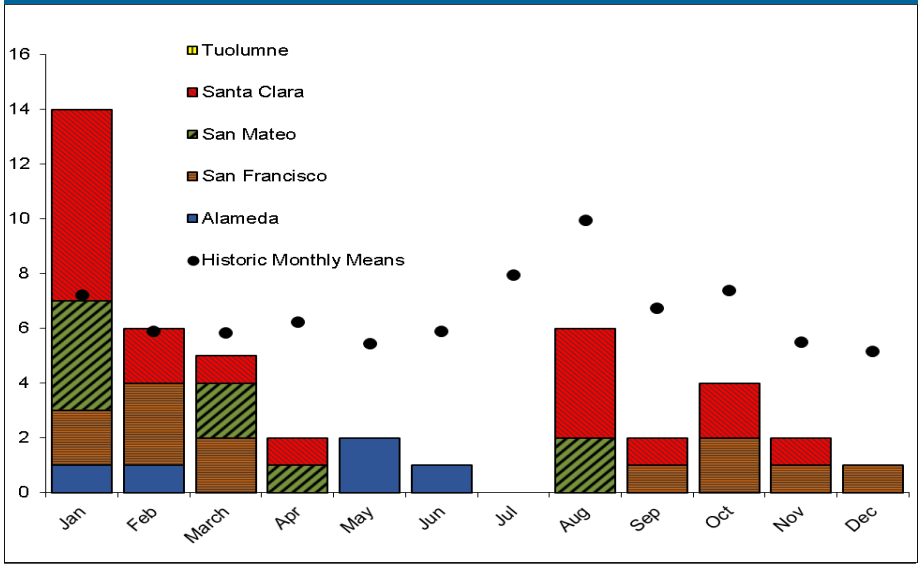
The Bay Area Cryptosporidiosis Surveillance Project (CSP) monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary

Fourth Quarter 2020: During the fourth quarter of 2020, 7 cases of cryptosporidiosis were reported in the project area. Fewer cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

2020 Surveillance: In 2020 a total of 45 cases were reported. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 1.23 cryptosporidiosis cases per 100,000 residents in San Francisco county (Table 1). Compared to 2019, the incidence of cryptosporidiosis decreased for San Mateo, Santa Clara, San Francisco, and Alameda counties. This decline in cases coincides with the timing of public health measures initiated in March 2020 to-date in response to the 2019 Coronavirus (COVID-19) pandemic. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2020—December 2020



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

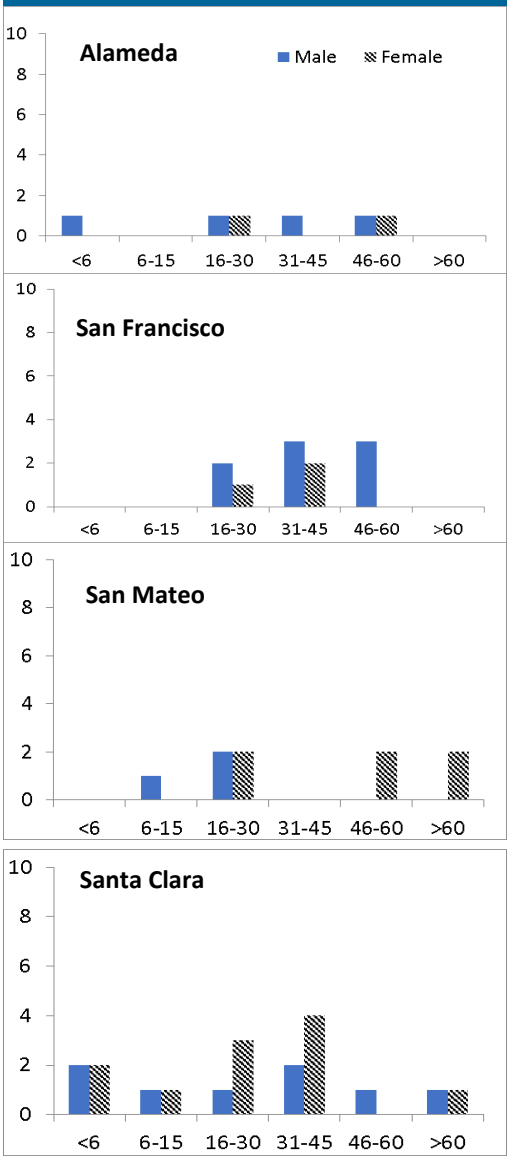
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2020

County	N	Cumulative Incidence per 100,000‡
Alameda	5	0.36
San Francisco	12	1.23
San Mateo	9	1.16
Santa Clara	19	0.97
Tuolumne	0	N/A
Total	45	0.84

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2019 and 2020. Sacramento, California, May 2020.

Figure 2: Case Counts (>1) by County, Age and Sex, January–December 2020



Cryptosporidiosis Case Demographics and Risk Factors

In 2020, 21 (47%) of cryptosporidiosis cases were white and 23 (51%) were male. Data on race/ethnicity were not collected for 8 (18%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2020, 6 (13%) reported contact with a suspected case during the incubation period. Sixteen (42%) cases over age 15 reported sexual contact during the incubation period; six (16%) adult male cases reported MSM activity. Six (13%) cases reported compromised immune status. Twenty-two (49%) cases reported contact with animals during the incubation period; three (7%) had contact with farm or non-domesticated animals. Fourteen (31%) cases reported foreign travel. Fifteen (33%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2020

	N	(%) by County
Alameda		
Male	4	(67%)
White	1	(17%)
Black	2	(33%)
Asian	2	(33%)
Unknown/Missing	1	(17%)
San Francisco		
Male	8	(72%)
White	6	(55%)
Black	1	(9%)
Hispanic	1	(9%)
Unknown/Missing	3	(27%)
San Mateo		
Male	3	(33%)
White	5	(56%)
Asian	2	(22%)
Hispanic	1	(11%)
Unknown/Missing	1	(11%)
Santa Clara		
Male	8	(42%)
White	9	(47%)
Black	2	(11%)
Asian	5	(26%)
Unknown/Missing	3	(16%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2020

Risk Factor	County	(%)
Contact with Suspect Case	San Francisco	(9%)
	San Mateo	(22%)
	Santa Clara	(16%)
Daycare	Alameda	(17%)
	Santa Clara	(11%)
Sexual Activity*	Alameda	(60%)
	San Francisco	(64%)
	Santa Clara	(46%)
MSM**	San Francisco	(55%)
Contact with Farm or Non-Domesticated Animals	San Francisco	(9%)
	Santa Clara	(11%)
Immune Suppression	Alameda	(17%)
	San Francisco	(27%)
	Santa Clara	(11%)
Foreign Travel	Alameda	(17%)
	San Francisco	(45%)
	San Mateo	(33%)
	Santa Clara	(26%)
Recreational Water Contact ***	San Francisco	(36%)
	San Mateo	(56%)
	Santa Clara	(32%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2020, CSP received case notification of positive *Cryptosporidium* laboratory results for 87% of the 45 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 69% of cases in 2020. Interviews were completed within one business day of notification for 52% of all interviewed cases.

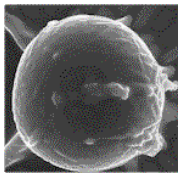


Table 4: Median Days between Specimen Collection and Report to CSP, 2020

		N	Median	Min	Max
2020		45	2	1	86
Quarter					
	Quarter 1	25	2	1	86
	Quarter 2	5	5	1	15
	Quarter 3	8	2	1	11
	Quarter 4	7	4	1	8
County					
	Alameda	5	6	1	25
	San Francisco	12	6	1	66
	San Mateo	9	1	1	86
	Santa Clara	19	2	1	11

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2020

County	Informant/Quarter	N	Median	Min	Max
	Alameda County Public Health Department	5	6	1	25
Alameda	Quarter 1	2	1	1	25
	Quarter 2	3	7	5	15
	Quarter 3	0	—	—	—
	Quarter 4	0	—	—	—
	San Francisco Communicable Disease Control	12	6	1	66
San Francisco	Quarter 1	7	6	1	66
	Quarter 2	0	—	—	—
	Quarter 3	1	6	6	6
	Quarter 4	4	7	3	8
	San Mateo County Health Services Agency	9	1	1	86
San Mateo	Quarter 1	6	1	1	86
	Quarter 2	1	1	1	1
	Quarter 3	2	2	1	2
	Quarter 4	0	—	—	—
	Santa Clara County Public Health Department	19	2	1	11
Santa Clara	Quarter 1	10	3	1	7
	Quarter 2	1	2	2	2
	Quarter 3	5	2	1	11
	Quarter 4	3	2	1	6

This report was created in February 2021 by the San Francisco Department of Public Health Environmental Health Branch in partnership with the San Francisco Public Utilities Commission.
For more information, contact mina.mohammadi@sfdph.org or visit our website at :
https://www.sfdph.org/dph/EH/Water/Crypto.asp

Cryptosporidiosis Surveillance Project

First Quarterly Report

2021

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: First Quarter 2021:

During the first quarter of 2021, 11 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2020. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–March 2021

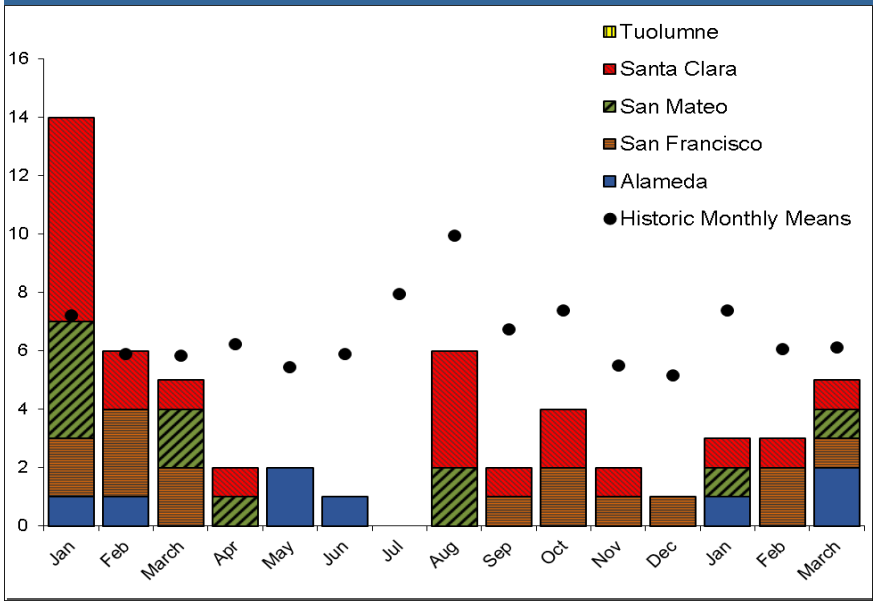
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	3	33%	0.18
San Francisco	3	67%	0.33
San Mateo	2	0%	0.26
Santa Clara	3	67%	0.15
Tuolumne	0	NA	NA
Total	11	45%	0.21

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2019 and 2020. Sacramento, California, May 2020.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2021.
- Figure 1: Monthly case totals by county for January 2020 through March 2021.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through March 2021.

Figure 1: Cryptosporidiosis Cases by Month and County, January–March 2021

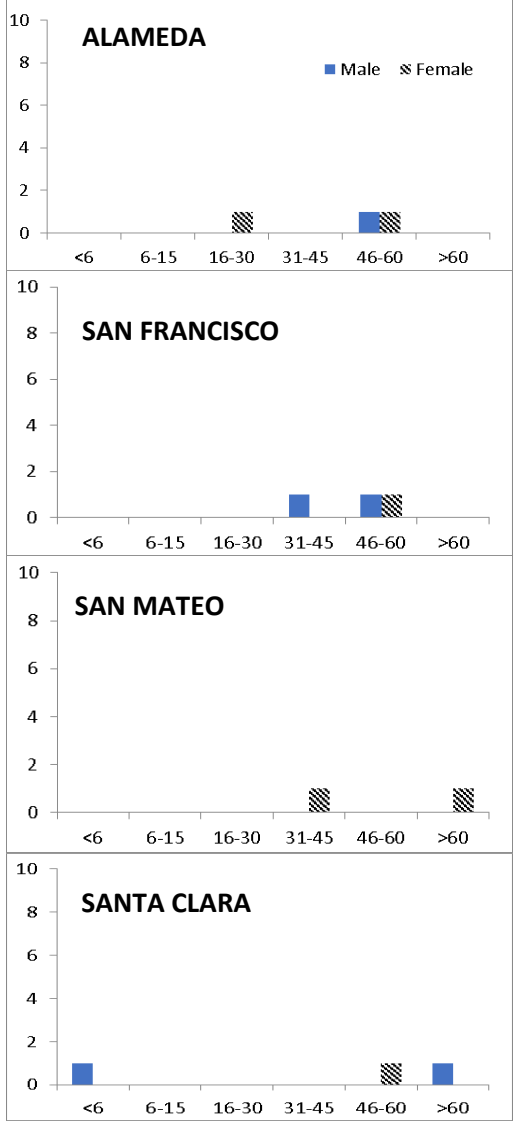


Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

Cryptosporidiosis cases decreased for San Mateo, Santa Clara, San Francisco, and Alameda counties from March 2020 to March 2021, falling below historical averages for the program. This decline in cases coincides with the timing of public health measures initiated in March 2020 in response to the 2019 Coronavirus (COVID-19) pandemic.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2021



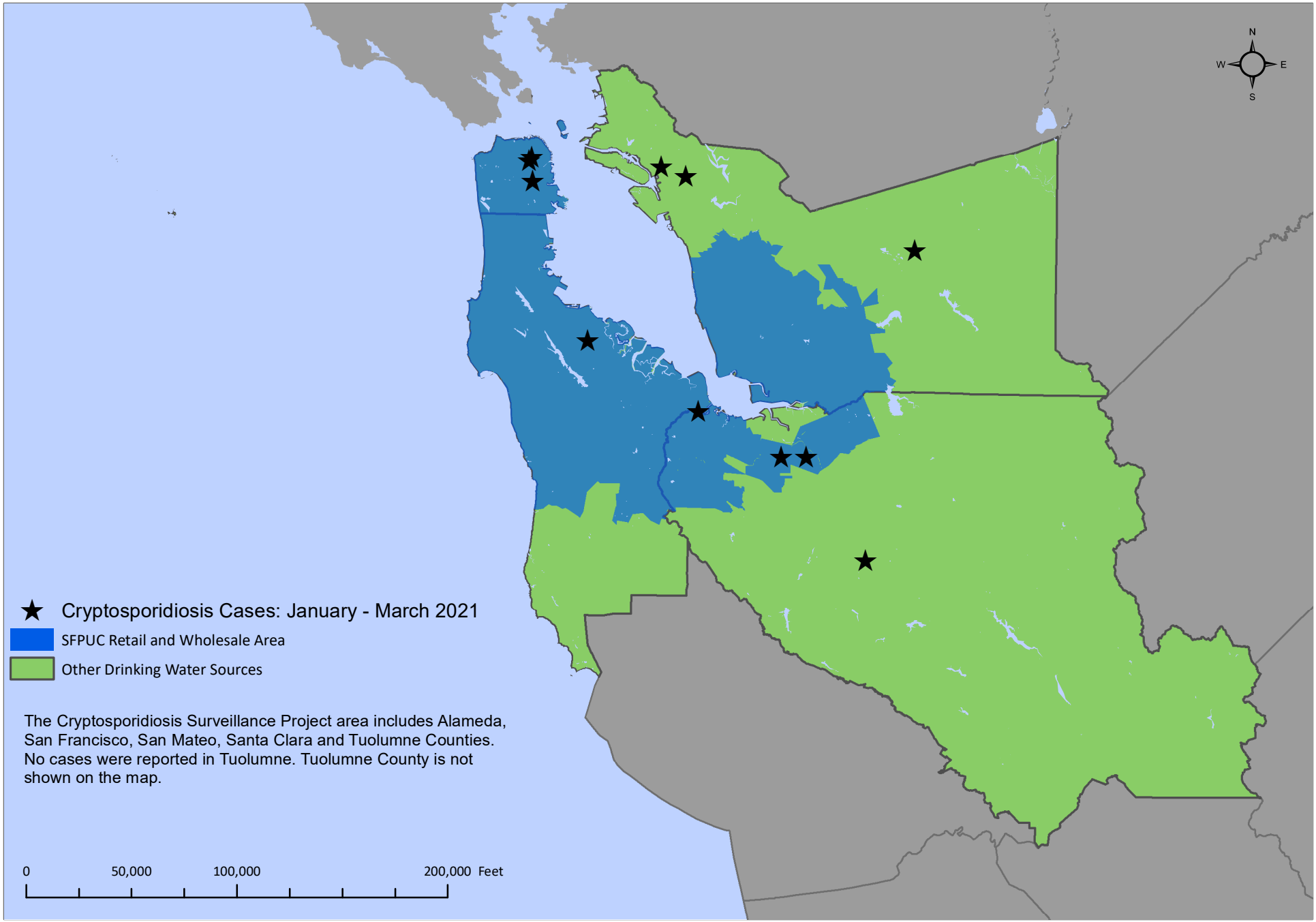
This report was created in May 2021 by the San Francisco Department of Public Health Environmental Health Branch in partnership with the San Francisco Public Utilities Commission.
For more information, contact mina.mohammadi@sfdph.org or visit our website at https://www.sfdph.org/dph/EH/Water/Crypto.asp
These data are preliminary and not yet confirmed. They do not suggest a source of infection nor reflect any association with the presence or absence of any potential contaminants in the water supply. This information should be considered privileged. It should not be reproduced or distributed.

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Second Quarterly Report

2021

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Second Quarter 2021:

During the second quarter of 2021, 25 cryptosporidiosis cases were reported. This is a lower number of cases than reported in the same period in 2020. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2021

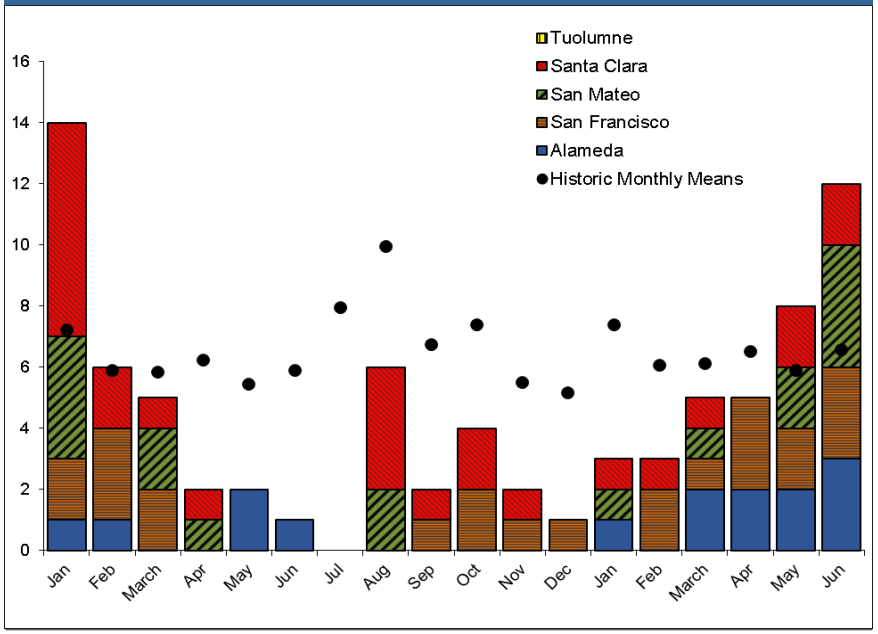
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	10	50%	0.60
San Francisco	11	55%	1.26
San Mateo	8	38%	1.05
Santa Clara	7	71%	0.36
Tuolumne	0	N/A	N/A
Total	36	53%	0.68

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2020 and 2021. Sacramento, California, May 2021.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2021.
- Figure 1: Monthly case totals by county for January 2020 through June 2021.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through June 2021.

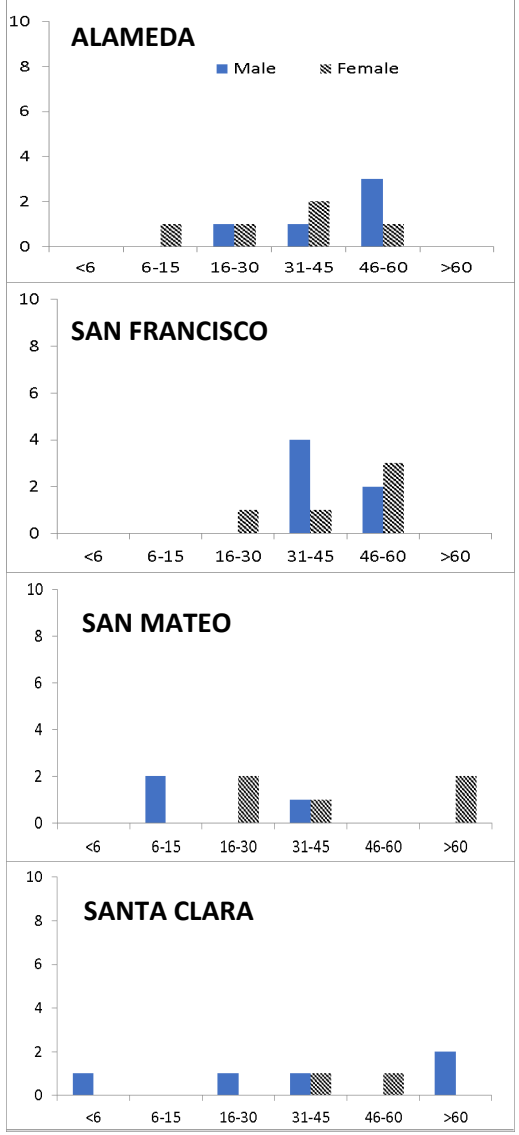
Figure 1: Cryptosporidiosis Cases by Month and County, January–June 2021



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts (>1) by County, Age and Sex, January– June 2021



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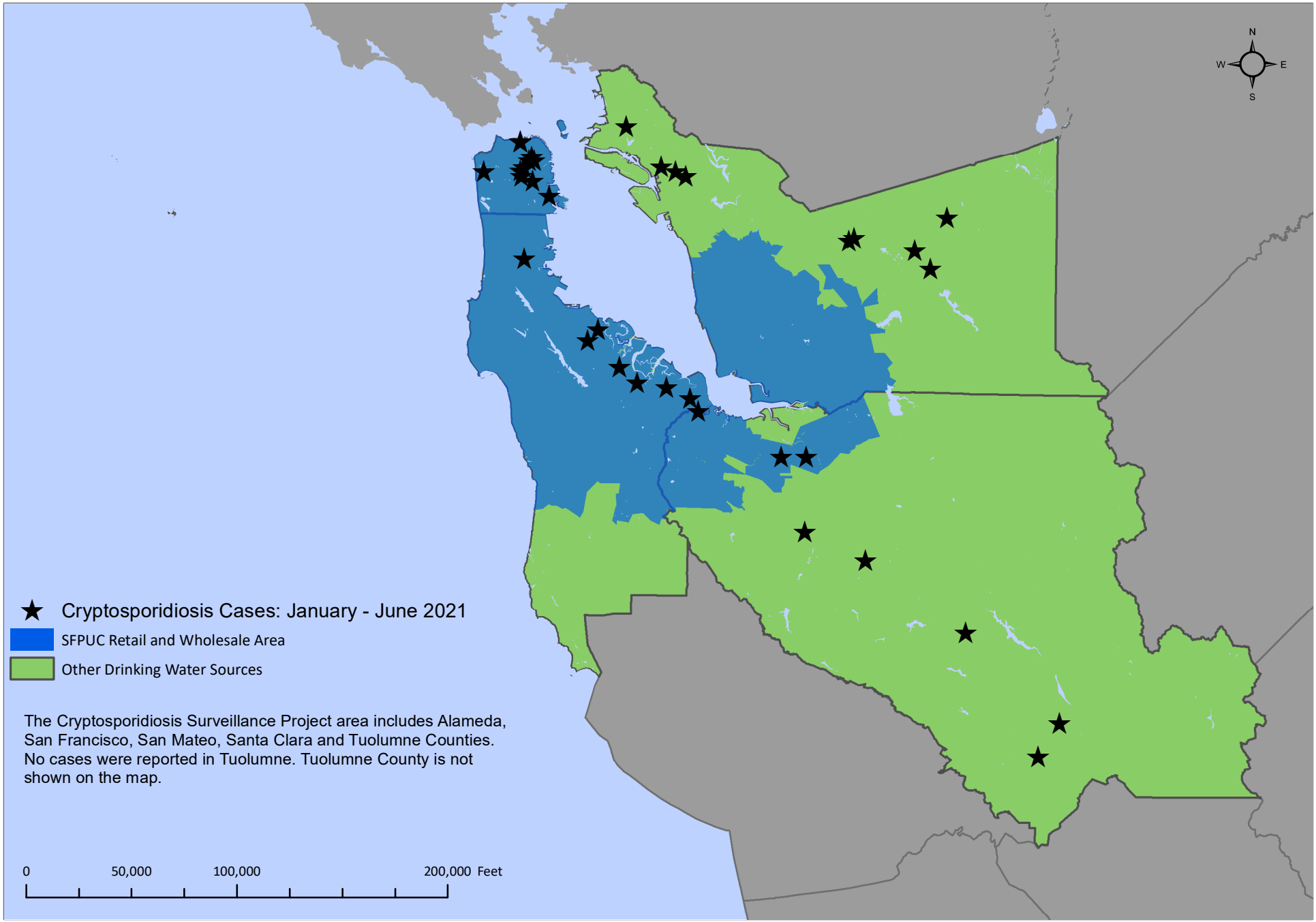
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Third Quarterly Report

2021

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Third Quarter 2021:

During the third quarter of 2021, 28 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2020. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2021

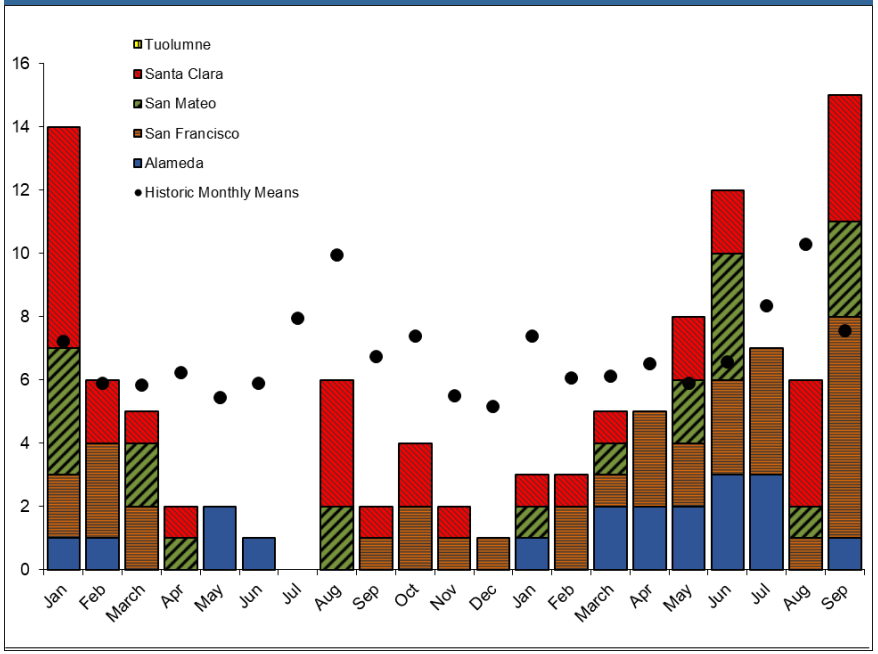
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	14	43%	0.85
San Francisco	23	57%	2.63
San Mateo	12	50%	1.57
Santa Clara	15	53%	0.78
Tuolumne	0	N/A	N/A
Total	64	52%	1.21

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2020 and 2021. Sacramento, California, May 2021.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2021.
- Figure 1: Monthly case totals by county for January 2020 through September 2021.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through September 2021.

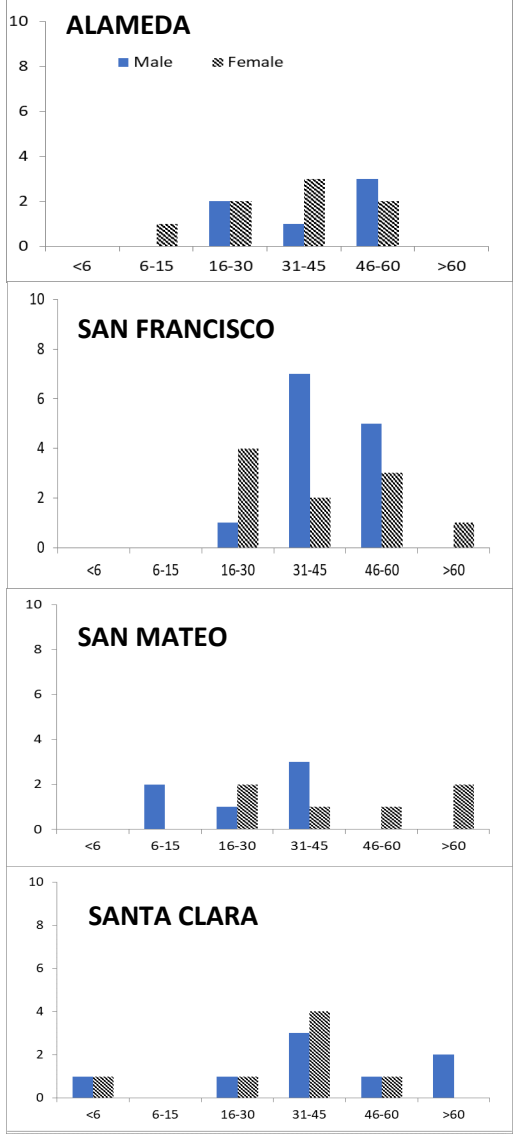
Figure 1: Cryptosporidiosis Cases by Month and County, January–September 2021



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts (>1) by County, Age and Sex, January – September 2021



This report was created in October 2021 by the San Francisco Department of Public Health Environmental Health Branch in partnership with the San Francisco Public Utilities Commission.
For more information, contact mina.mohammadi@sfdph.org or visit our website at https://www.sfdph.org/dph/EH/Water/Crypto.asp
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POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne Counties

San Francisco Water Power Sewer
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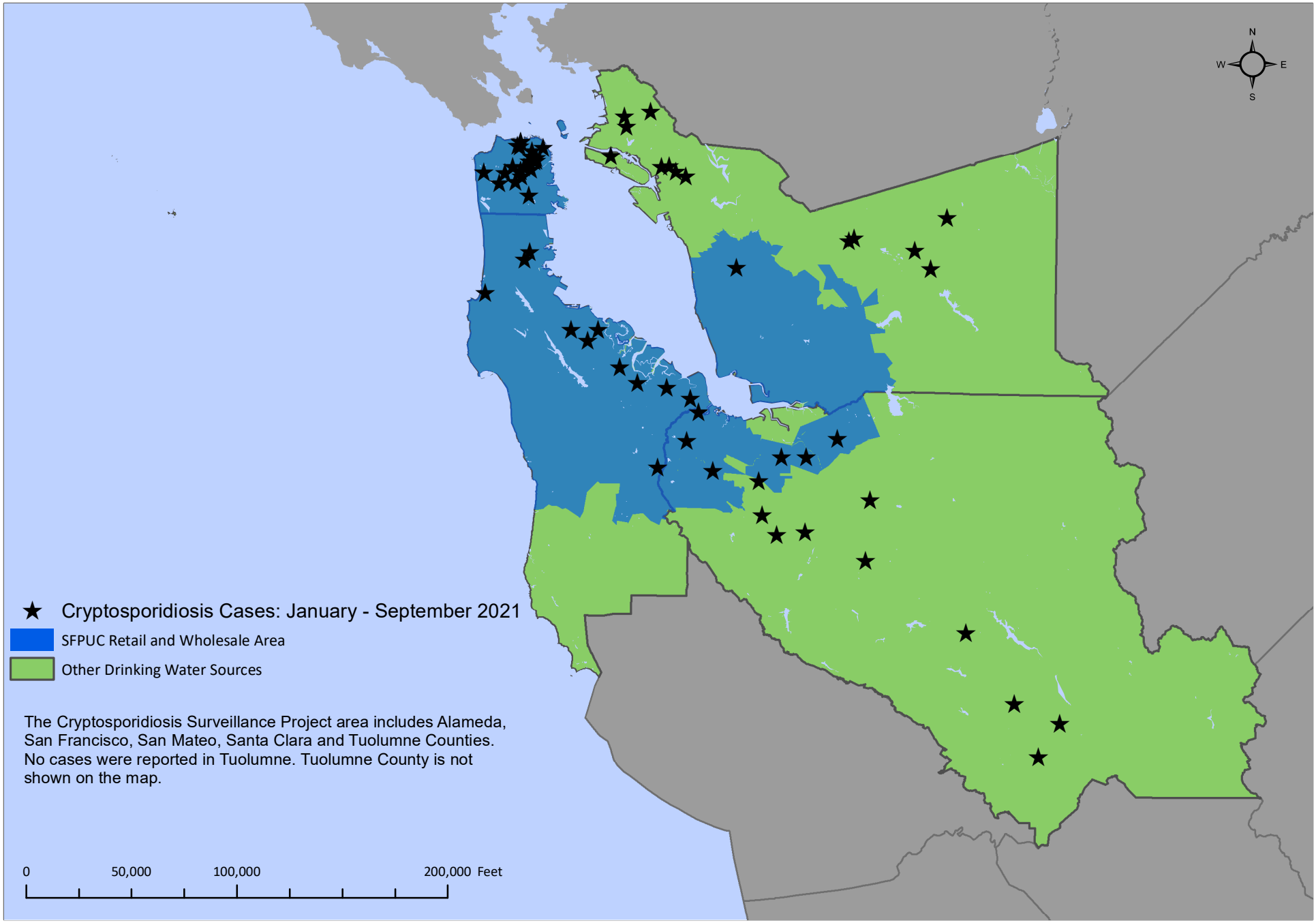


Cryptosporidiosis Surveillance Project Annual Report 2021

The Bay Area Cryptosporidiosis Surveillance Project (CSP) monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary

Fourth Quarter 2021: During the fourth quarter of 2021, 17 cases of cryptosporidiosis were reported in the project area. More cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

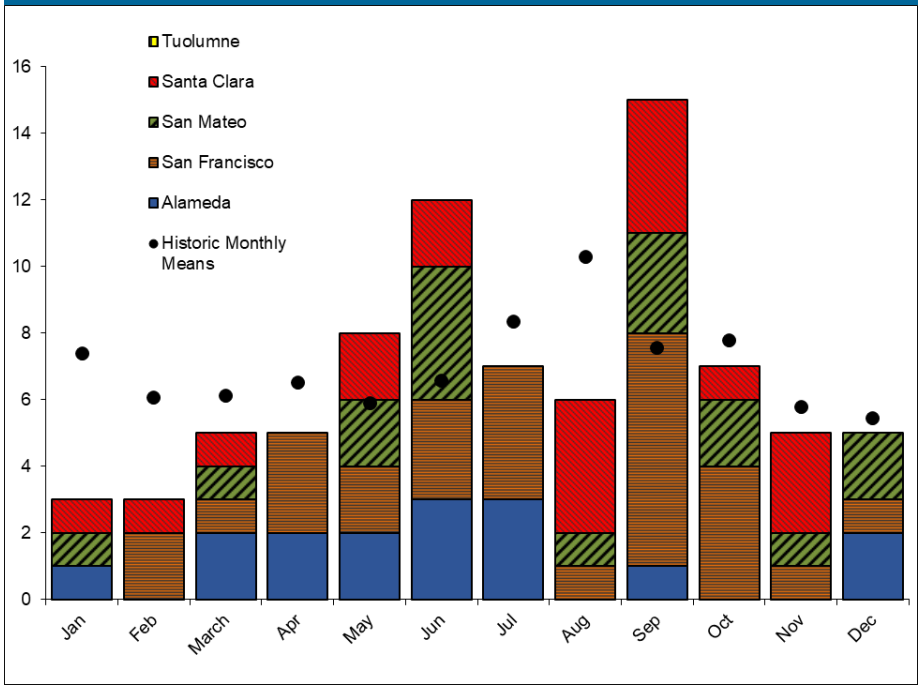
2021 Surveillance: In 2021 a total of 81 cases were reported. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 3.31 cryptosporidiosis cases per 100,000 residents in San Francisco county (Table 1). Compared to 2020, the incidence of cryptosporidiosis increased for San Mateo, Santa Clara, San Francisco, and Alameda counties. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2021

County	N	Cumulative Incidence per 100,000‡
Alameda	16	0.97
San Francisco	29	3.31
San Mateo	17	2.22
Santa Clara	19	0.98
Tuolumne	0	N/A
Total	81	1.53

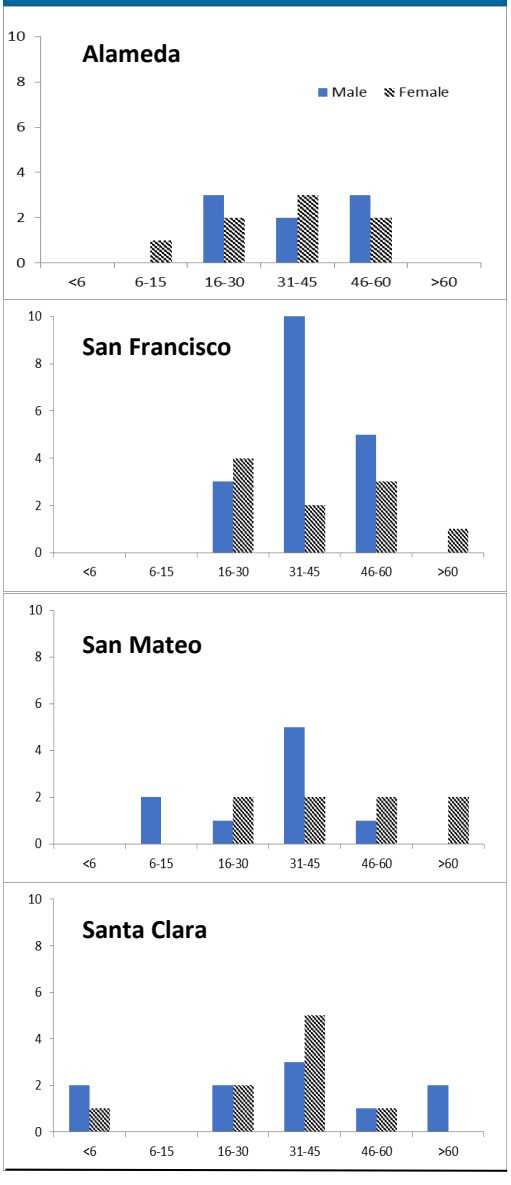
‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2020 and 2021. Sacramento, California, May 2021.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2021—December 2021



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

Figure 2: Case Counts (>1) by County, Age and Sex, January–December 2021



Cryptosporidiosis Case Demographics and Risk Factors

In 2021, 49 (60%) of cryptosporidiosis cases were white and 46 (57%) were male. Data on race/ethnicity were not collected for 7 (9%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2021, 5 (6%) reported contact with a suspected case during the incubation period. Twenty-nine (36%) cases over age 15 reported sexual contact during the incubation period; ten (12%) adult male cases reported MSM activity. Twenty-six (32%) cases reported compromised immune status. Thirty-six (44%) cases reported contact with animals during the incubation period; five (6%) had contact with farm or non-domesticated animals. Six (7%) cases reported foreign travel. Twenty-two (27%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2021

	N	(%) by County
Alameda		
Male	8	(50%)
White	11	(69%)
Black	2	(13%)
Asian	1	(6%)
Unknown/Missing	2	(13%)
San Francisco		
Male	19	(66%)
White	16	(55%)
Black	3	(10%)
Asian	3	(10%)
Hispanic	5	(17%)
Unknown/Missing	2	(7%)
San Mateo		
Male	10	(59%)
White	12	(71%)
Black	2	(12%)
Hispanic	1	(6%)
Unknown/Missing	2	(12%)
Santa Clara		
Male	9	(47%)
White	10	(53%)
Asian	5	(26%)
Hispanic	3	(16%)
Other	1	(5%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2021

Risk Factor	County	(%)
Contact with Suspect Case	San Francisco	(3%)
	San Mateo	(6%)
	Santa Clara	(16%)
Daycare	Alameda	(6%)
	San Francisco	(7%)
	Santa Clara	(5%)
Sexual Activity*	Alameda	(38%)
	San Francisco	(41%)
	San Mateo	(12%)
	Santa Clara	(47%)
MSM**	San Francisco	(21%)
	Alameda	(13%)
	San Mateo	(6%)
	Santa Clara	(5%)
Contact with Farm or Non-Domesticated Animals	Alameda	(13%)
	San Francisco	(3%)
	San Mateo	(6%)
	Santa Clara	(5%)
Immune Suppression	Alameda	(19%)
	San Francisco	(38%)
	San Mateo	(24%)
	Santa Clara	(42%)
Foreign Travel	Alameda	(13%)
	San Francisco	(3%)
	San Mateo	(18%)
Recreational Water Contact ***	Alameda	(50%)
	San Francisco	(21%)
	San Mateo	(18%)
	Santa Clara	(26%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2021, CSP received case notification of positive *Cryptosporidium* laboratory results for 78% of the 81 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 74% of cases in 2021. Interviews were completed within one business day of notification for 51% of all interviewed cases.

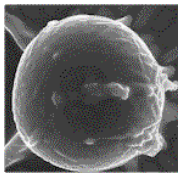


Table 4: Median Days between Specimen Collection and Report to CSP, 2021

		N	Median	Min	Max
2021		81	5	1	36
Quarter					
	Quarter 1	11	8	1	28
	Quarter 2	25	4	1	23
	Quarter 3	28	4	1	36
	Quarter 4	17	5	1	9
County					
	Alameda	16	5	1	23
	San Francisco	29	3	1	36
	San Mateo	17	5	1	23
	Santa Clara	19	6	2	14

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2021

County	Informant/Quarter	N	Median	Min	Max
	Alameda County Public Health Department	16	5	1	23
Alameda	Quarter 1	3	4	1	12
	Quarter 2	7	5	1	23
	Quarter 3	4	5	3	7
	Quarter 4	2	5	3	6
	San Francisco Communicable Disease Control	29	3	1	36
San Francisco	Quarter 1	3	10	8	28
	Quarter 2	8	4	1	12
	Quarter 3	12	3	1	36
	Quarter 4	6	3	1	5
	San Mateo County Health Services Agency	17	5	1	23
San Mateo	Quarter 1	2	9	5	13
	Quarter 2	6	6	1	9
	Quarter 3	4	5	1	23
	Quarter 4	5	6	1	9
	Santa Clara County Public Health Department	19	6	2	14
Santa Clara	Quarter 1	3	8	6	14
	Quarter 2	4	4	2	8
	Quarter 3	8	6	2	11
	Quarter 4	4	6	4	7

This report was created in March 2022 by the San Francisco Department of Public Health Environmental Health Branch in partnership with the San Francisco Public Utilities Commission.
For more information, contact mina.mohammadi@sfdph.org or visit our website at :
https://www.sfdph.org/dph/EH/Water/Crypto.asp

Cryptosporidiosis Surveillance Project

First Quarterly Report

2022

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: First Quarter 2022:

During the first quarter of 2022, 27 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2021. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–March 2022

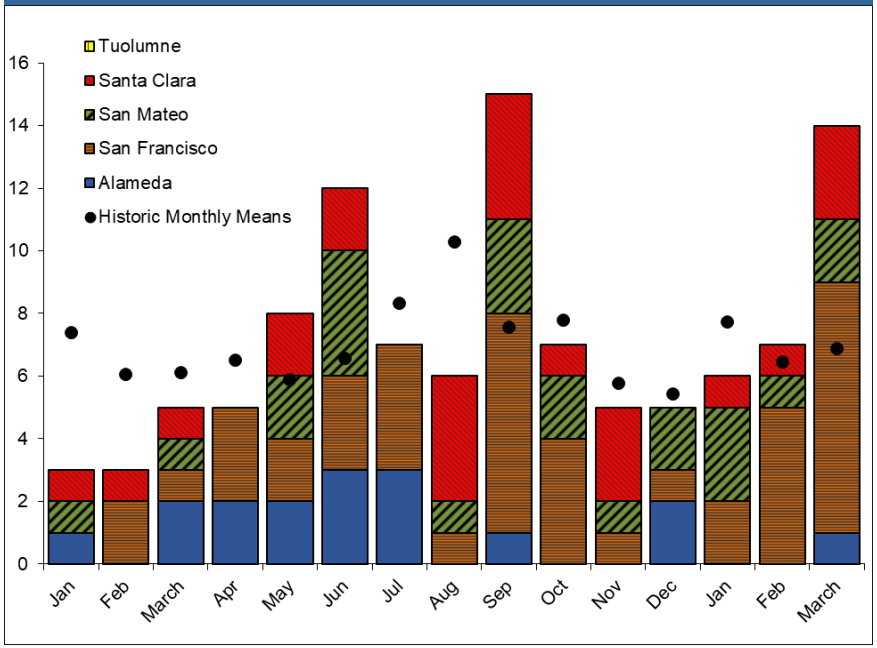
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	1	0%	0.06
San Francisco	15	67%	1.78
San Mateo	6	17%	0.81
Santa Clara	5	40%	0.26
Tuolumne	0	NA	NA
Total	27	48%	0.52

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2021 and 2022. Sacramento, California, May 2022.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2022.
- Figure 1: Monthly case totals by county for January 2021 through March 2022.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through March 2022.

Figure 1: Cryptosporidiosis Cases by Month and County, January–March 2022

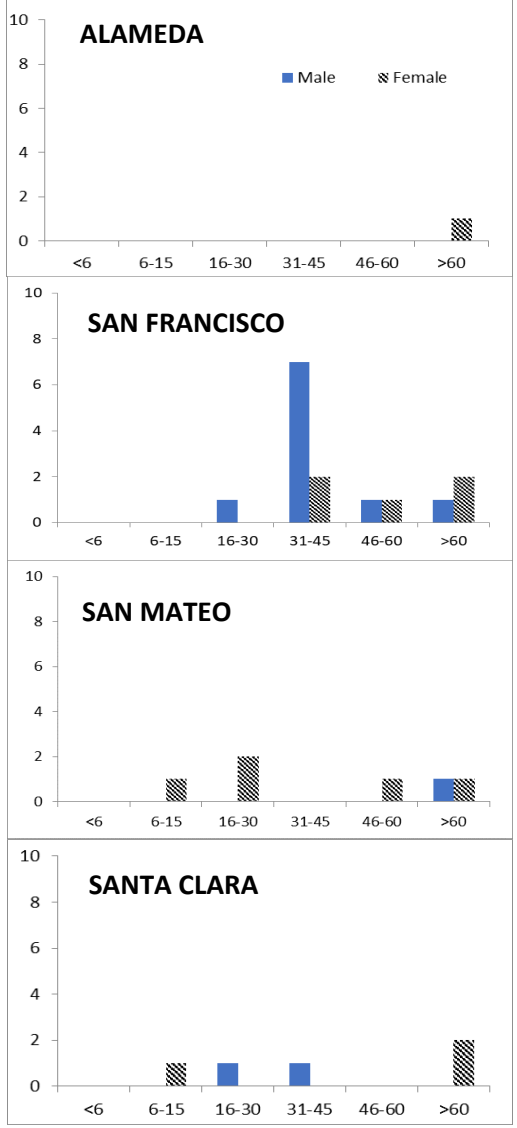


Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

Cryptosporidiosis cases decreased for San Mateo, Santa Clara, San Francisco, and Alameda counties from March 2020 to March 2021, falling below historical averages for the program. This decline in

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2022



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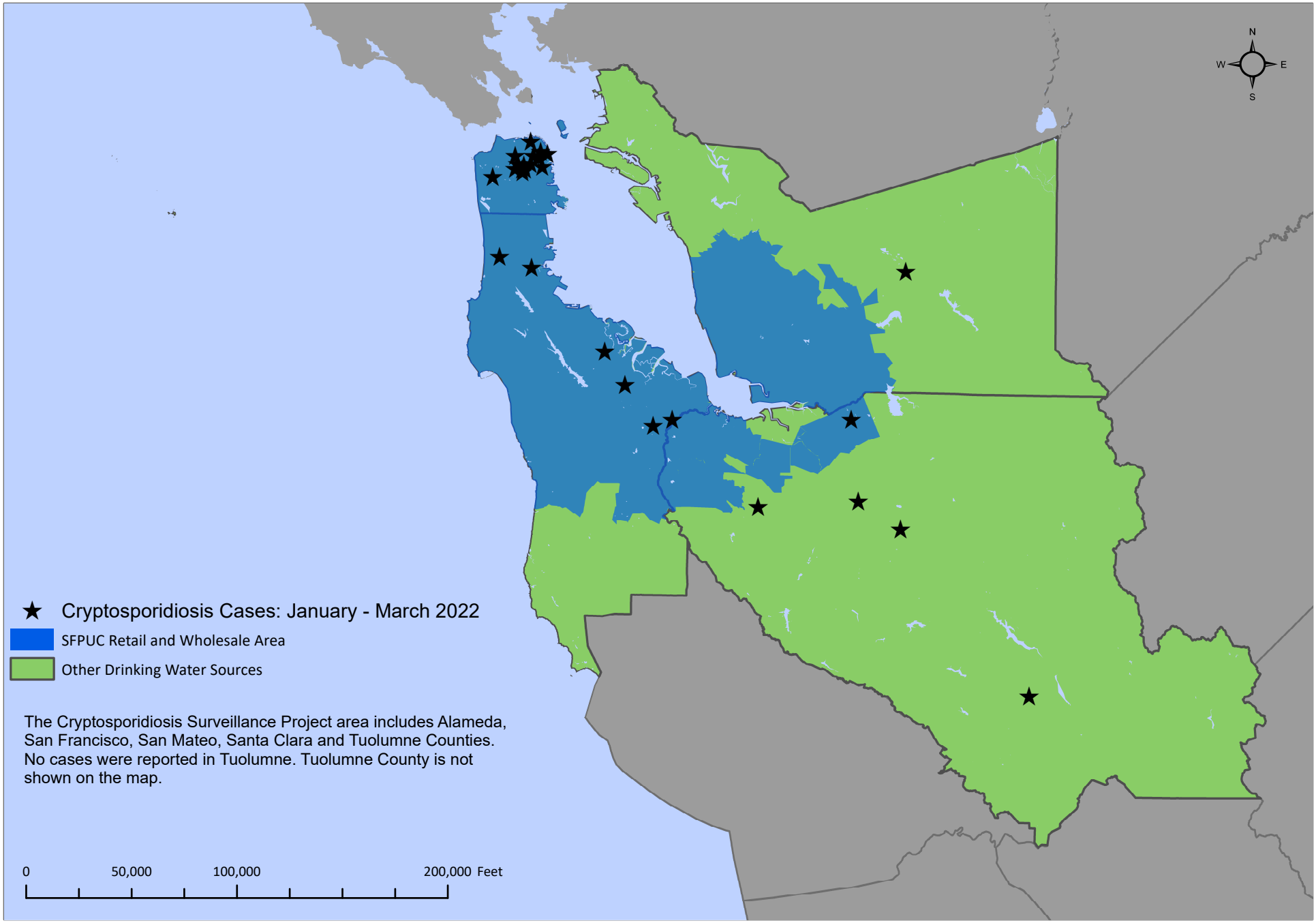
POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne Counties

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



Cryptosporidiosis Surveillance Project

Second Quarterly Report

2022

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Second Quarter 2022:

During the second quarter of 2022, 46 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2021. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2022

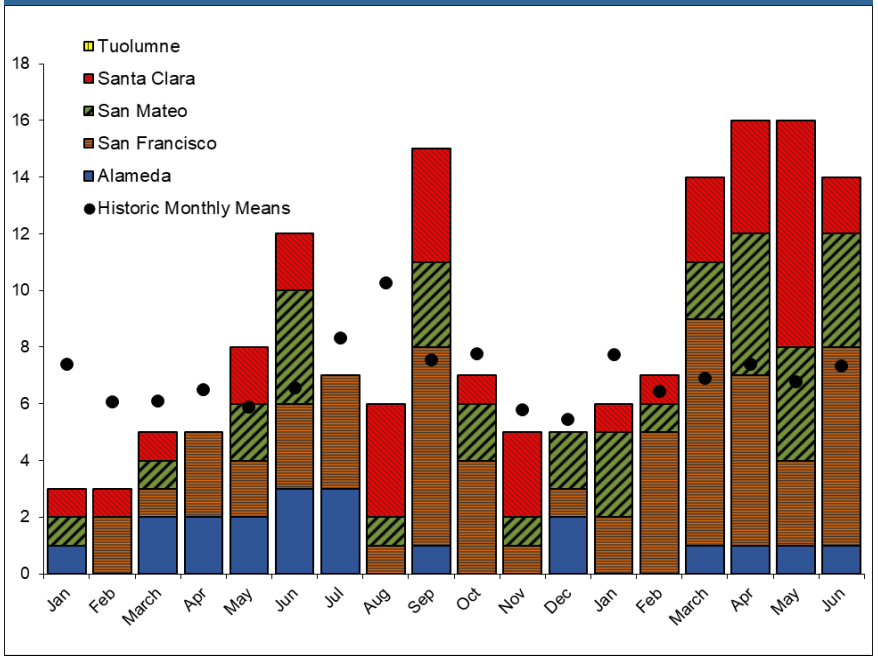
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	4	25%	0.24
San Francisco	31	68%	3.68
San Mateo	19	37%	2.55
Santa Clara	19	47%	1.00
Tuolumne	0	NA	NA
Total	73	52%	1.41

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2021 and 2022. Sacramento, California, May 2022.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2022.
- Figure 1: Monthly case totals by county for January 2021 through June 2022.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through June 2022.

Figure 1: Cryptosporidiosis Cases by Month and County, January–June 2022

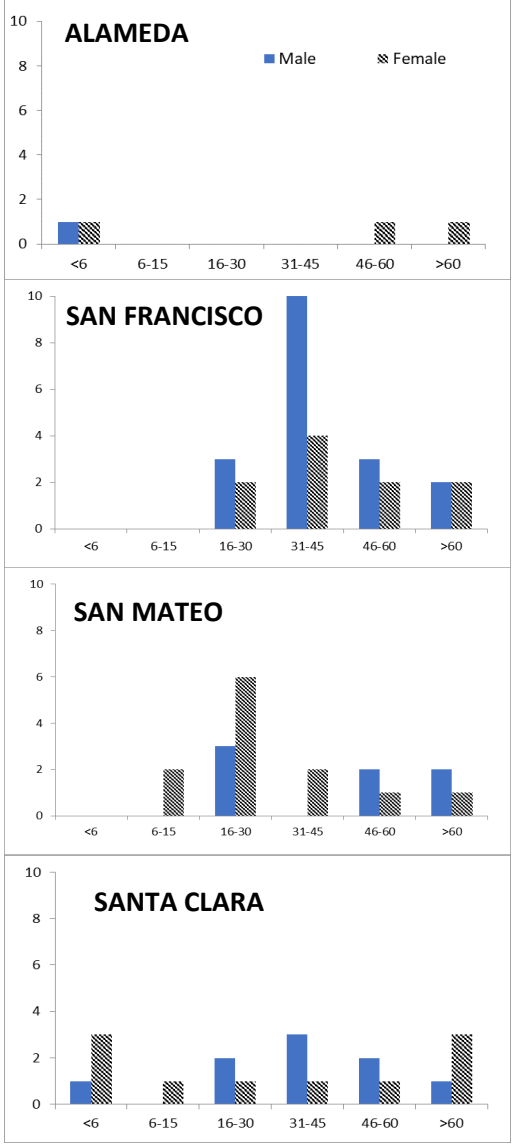


Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

Cryptosporidiosis cases decreased for San Mateo, Santa Clara, San Francisco, and Alameda counties

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– June 2022



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POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne Counties

San Francisco Water Power Sewer
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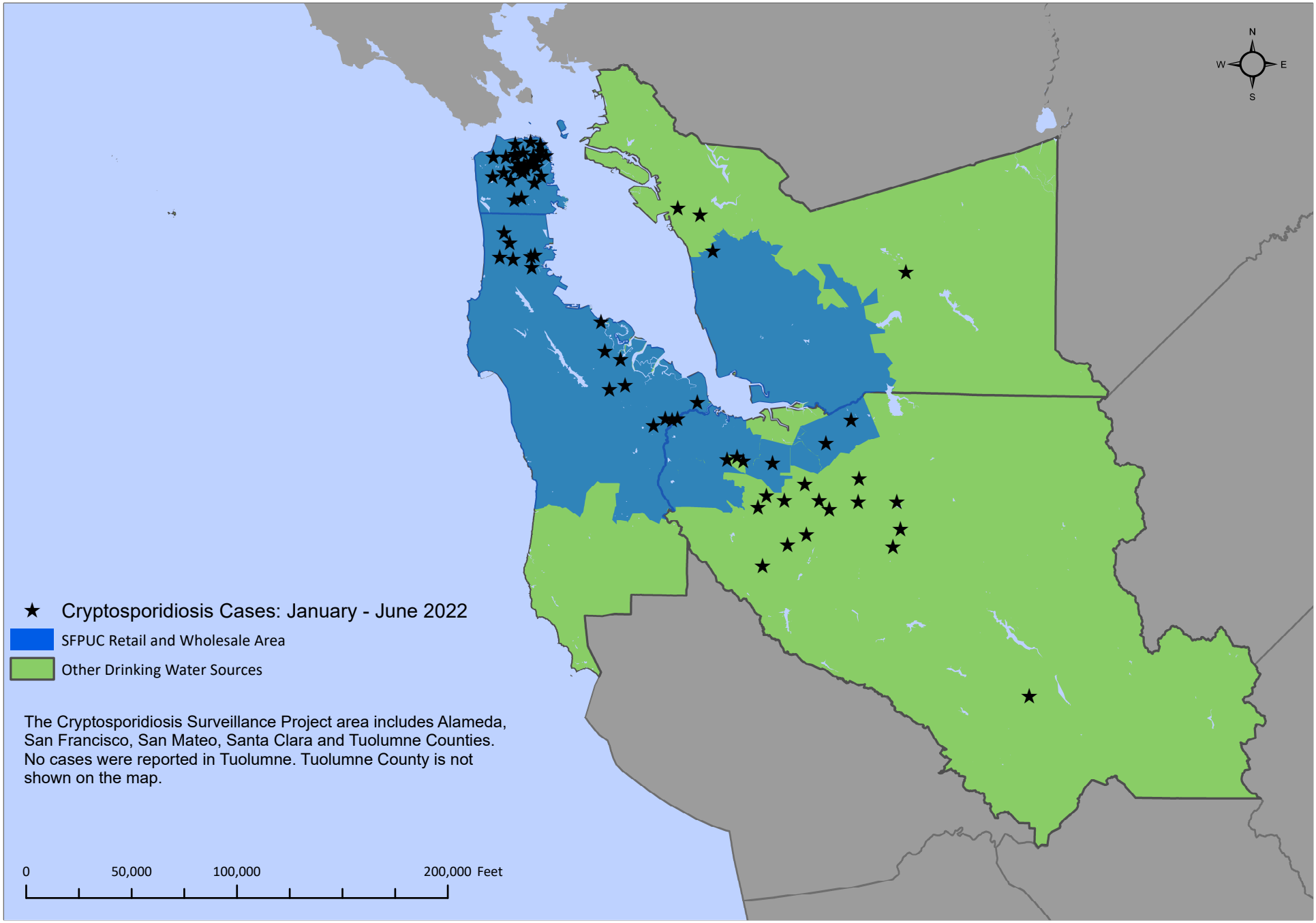


Cryptosporidiosis Surveillance Project

Third Quarterly Report

2022

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

CSP monitors human cryptosporidiosis in the San Francisco Bay Area counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara counties, and Tuolumne county, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Third Quarter 2022:

During the third quarter of 2022, 43 cryptosporidiosis cases were reported. This is a higher number of cases than reported in the same period in 2021. No system–wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2022

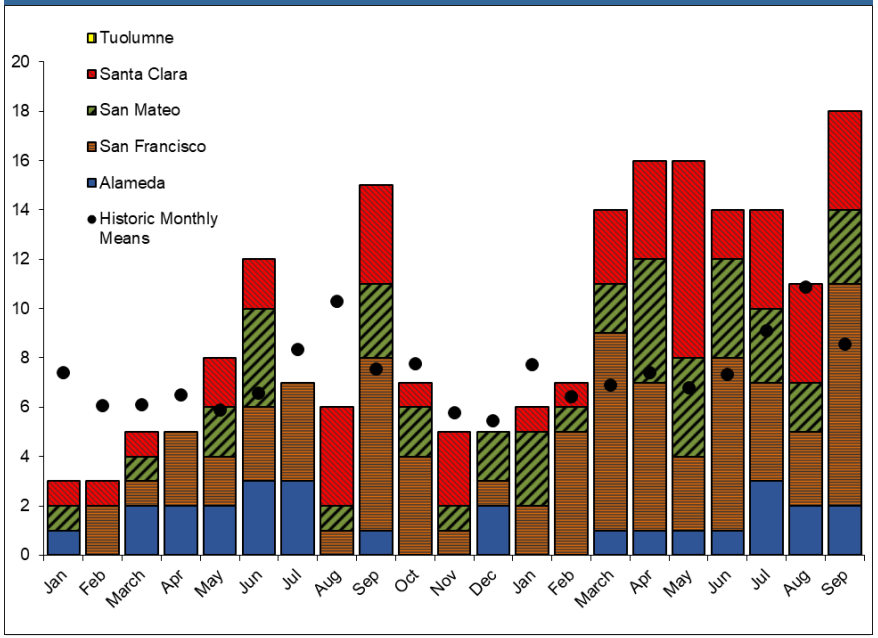
County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	11	27%	0.67
San Francisco	47	70%	5.58
San Mateo	27	37%	3.63
Santa Clara	31	45%	1.64
Tuolumne	0	N/A	N/A
Total	116	60%	2.24

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percentage Change—January 1, 2021 and 2022. Sacramento, California, May 2022.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2022.
- Figure 1: Monthly case totals by county for January 2021 through September 2022.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through September 2022.

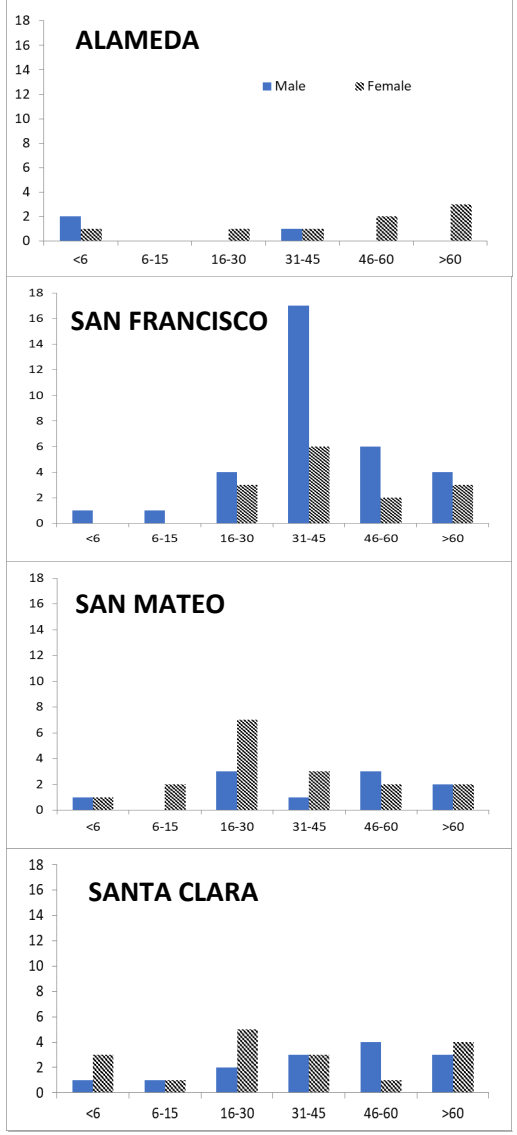
Figure 1: Cryptosporidiosis Cases by Month and County, January–September 2022



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts (>1) by County, Age and Sex, January – September 2022



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ENVIRONMENTAL HEALTH

The Bay Area Cryptosporidiosis Surveillance Project

Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne Counties

San Francisco Water Power Sewer
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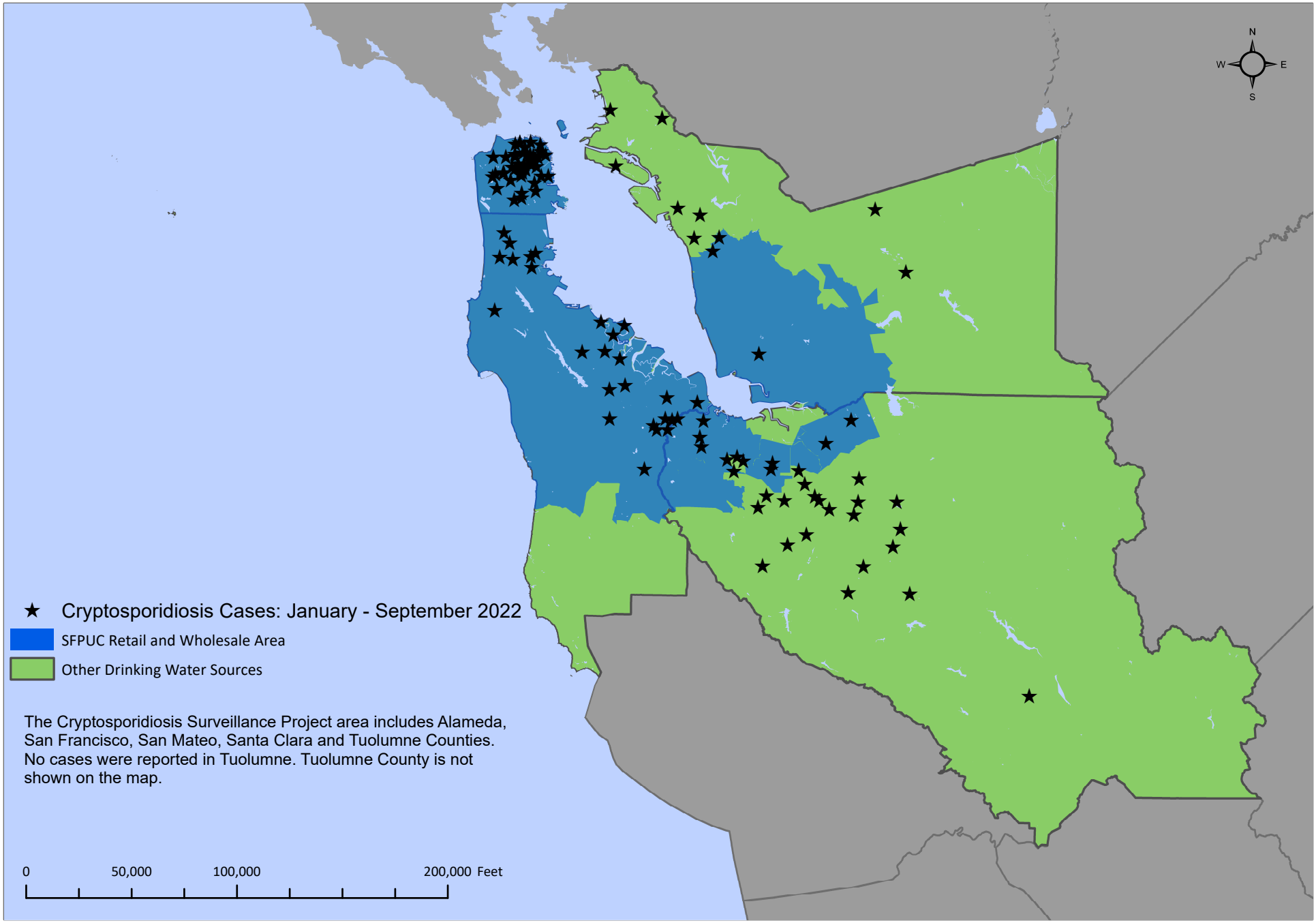


Cryptosporidiosis Surveillance Project Annual Report 2022

The Bay Area Cryptosporidiosis Surveillance Project (CSP) monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary

Fourth Quarter 2022: During the fourth quarter of 2022, 44 cases of cryptosporidiosis were reported in the project area. More cases were reported in the fourth quarter than in the same period of the previous year. Figure 1 presents case counts by month and county.

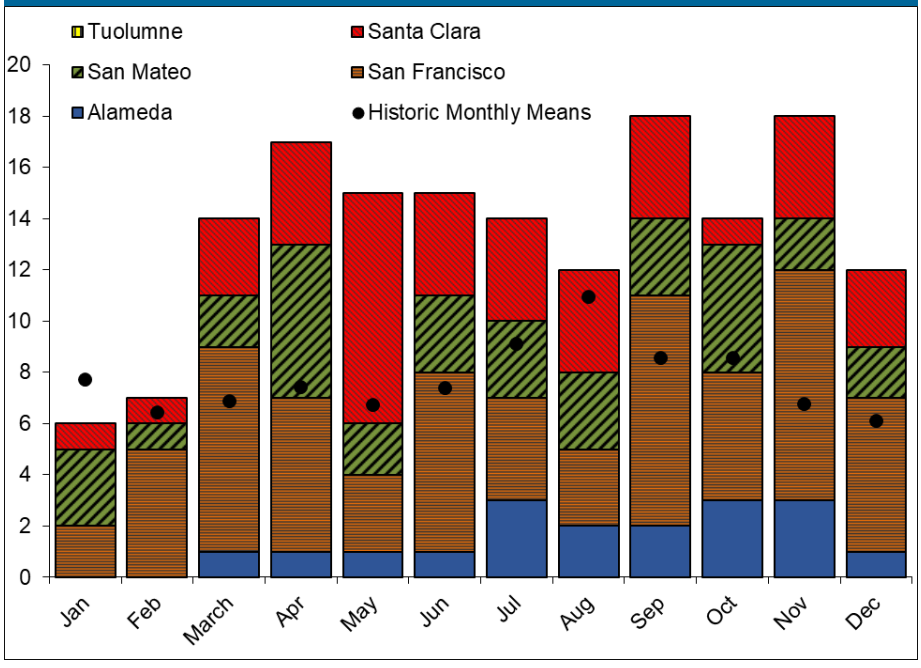
2022 Surveillance: In 2022 a total of 162 cases were reported. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to cases or 7.95 cryptosporidiosis cases per 100,000 residents in San Francisco county (Table 1). Compared to 2021, the incidence of cryptosporidiosis increased for San Mateo, Santa Clara, San Francisco, and Alameda counties. Table 1 lists case counts and cumulative incidence by county. Figure 2 presents case counts by county, age, and gender.

Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2022

County	N	Cumulative Incidence per 100,000‡
Alameda	18	1.09
San Francisco	67	7.95
San Mateo	35	4.70
Santa Clara	42	2.22
Tuolumne	0	N/A
Total	162	3.12

‡ Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1. Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2021 and 2022. Sacramento, California, May 2022.

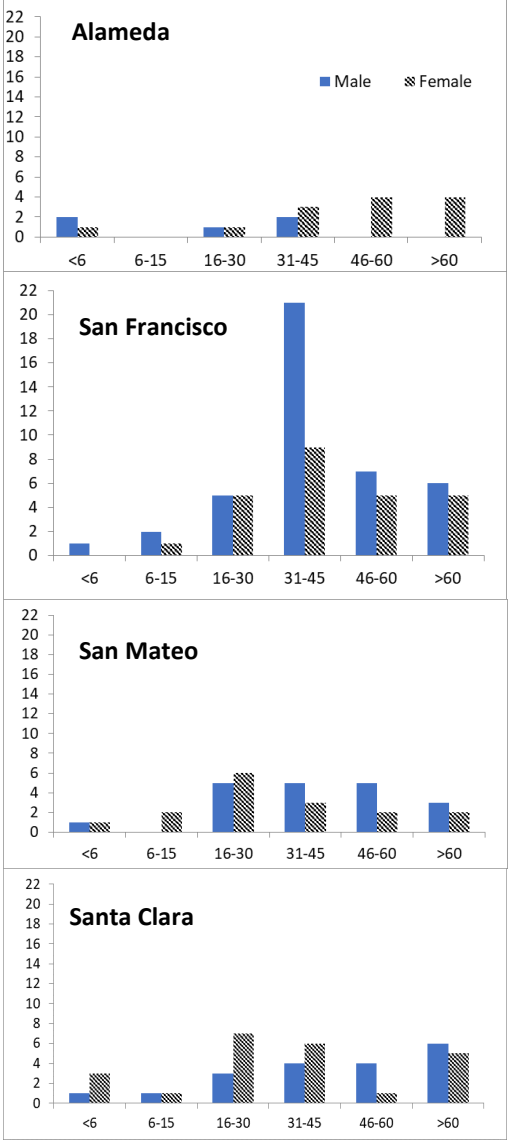
Figure 1: Cryptosporidiosis Cases by Month and County, January 2022—December 2022



Points represent monthly mean case counts since 2000 to date. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were no reported cases for the month of March 2013.

† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts (>1) by County, Age and Sex, January–December 2022



Cryptosporidiosis Case Demographics and Risk Factors

In 2022, 101 (62%) of cryptosporidiosis cases were white and 85 (52%) were male. Data on race/ethnicity were not collected for 6 (4%) of cases. Table 2 presents case demographic data by county.

Known risk factors for acquiring cryptosporidiosis infection include contact with animals, day care attendance or work, health care work, travel to developing countries, consumption of untreated water, sexual contact with another case, and having a compromised immune system. Among cases with a specimen collected in 2022, 15 (9%) reported contact with a suspected case during the incubation period. Fifty-one (31%) cases over age 15 reported sexual contact during the incubation period; eighteen (11%) adult male cases reported MSM activity. Forty-eight (29%) cases reported compromised immune status. Forty-five (28%) cases reported contact with animals during the incubation period; five (3%) had contact with farm or non-domesticated animals. Fifty-three (33%) cases reported foreign travel. Fifty-one (31%) cases reported any recreational water exposure. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County, 2022

	N	(%) by County
Alameda		
Male	5	(28%)
White	10	(56%)
Black	1	(5%)
Hispanic	5	(28%)
Unknown/Missing	2	(11%)
San Francisco		
Male	42	(63%)
White	50	(75%)
Black	3	(4%)
Asian	8	(12%)
Hispanic	3	(4%)
Unknown/Missing	3	(4%)
San Mateo		
Male	19	(54%)
White	21	(60%)
Asian	5	(14%)
Hispanic	9	(26%)
Santa Clara		
Male	19	(44%)
White	20	(47%)
Black	3	(7%)
American Indian/Alaskan	1	(2%)
Asian	11	(26%)
Hispanic	7	(16%)
Unknown/Missing	1	(2%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2022

Risk Factor	County	(%)
Contact with Suspect Case	Alameda	(11%)
	San Francisco	(10%)
	San Mateo	(3%)
	Santa Clara	(12%)
Daycare	Alameda	(17%)
	San Francisco	(6%)
	San Mateo	(9%)
	Santa Clara	(12%)
Sexual Activity*	Alameda	(11%)
	San Francisco	(51%)
	San Mateo	(23%)
	Santa Clara	(16%)
MSM**	San Francisco	(25%)
	Santa Clara	(2%)
Contact with Farm or Non-Domesticated Animals	Alameda	(6%)
	San Francisco	(4%)
	San Mateo	(3%)
	Santa Clara	(2%)
Immune Suppression	Alameda	(17%)
	San Francisco	(30%)
	San Mateo	(31%)
	Santa Clara	(33%)
Foreign Travel	Alameda	(33%)
	San Francisco	(28%)
	San Mateo	(26%)
	Santa Clara	(44%)
Recreational Water Contact ***	Alameda	(33%)
	San Francisco	(34%)
	San Mateo	(23%)
	Santa Clara	(33%)

* Denominator includes cases over 15 years

** Denominator includes male cases over 15 years

***Includes treated and untreated recreational water exposure

Cryptosporidiosis Surveillance Timeliness

The Cryptosporidiosis Surveillance Project receives case reports through cooperation with clinical diagnostic laboratories, county health departments, and the California Emerging Infections Program.

In 2022, CSP received case notification of positive *Cryptosporidium* laboratory results for 82% of the 162 cases within 7 days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. According to Title 17 of the California Code of Regulations, *Cryptosporidium* infections are required to be reported to county health departments within 1 day of identification. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 73% of cases in 2022. Interviews were completed within one business day of notification for 54% of all interviewed cases.

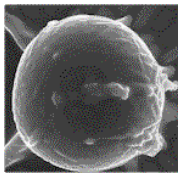


Table 4: Median Days between Specimen Collection and Report to CSP, 2022

		N	Median	Min	Max
2022		162	5	1	275
Quarter					
	Quarter 1	27	6	2	40
	Quarter 2	47	4	2	275
	Quarter 3	44	5	2	143
	Quarter 4	44	1	1	10
County					
	Alameda	18	6	2	18
	San Francisco	67	4	1	40
	San Mateo	35	5	2	275
	Santa Clara	42	5	2	199

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2022

County	Informant/Quarter	N	Median	Min	Max
	Alameda County Public Health Department	18	6	2	18
Alameda	Quarter 1	1	6	6	6
	Quarter 2	3	8	6	15
	Quarter 3	7	8	4	18
	Quarter 4	7	3	2	6
	San Francisco Communicable Disease Control	67	4	1	40
San Francisco	Quarter 1	15	6	2	40
	Quarter 2	16	4	2	6
	Quarter 3	16	3	2	14
	Quarter 4	20	4	1	7
	San Mateo County Health Services Agency	35	5	2	275
San Mateo	Quarter 1	6	6	4	9
	Quarter 2	11	4	3	275
	Quarter 3	9	7	3	143
	Quarter 4	9	5	2	6
	Santa Clara County Public Health Department	42	5	2	199
Santa Clara	Quarter 1	5	4	3	8
	Quarter 2	17	6	2	199
	Quarter 3	12	5	2	21
	Quarter 4	8	5	2	10

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