



Cryptosporidiosis Surveillance Project

Annual Report

2004



The Bay Area Cryptosporidiosis Surveillance Project began in June 1996 as a multi- agency* collaborative effort to monitor cryptosporidiosis incidence in eight Bay Area counties: Alameda, Contra Costa, San Francisco, Marin, San Mateo, Santa Clara, Solano, and Sonoma. Tuolumne County is the chief source water to the SFPUC and was added to the surveillance system in June 1999. In 2002, surveillance in Marin, Solano, and Sonoma counties was discontinued. Since January 2004 the San Francisco Department of Public Health (SFDPH) has been coordinating cryptosporidiosis surveillance for the five counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne.

2004 Surveillance summary: During the surveillance period between January and December 2004, no outbreaks of cryptosporidiosis were detected in the SFPUC service area. In all SFPUC service area counties

Table 1. Case totals and rates of cryptosporidiosis by year in 5 county SFPUC service area*

Year	Total number of cases	Rate	National rate ¹
1996*	55	2.17	NA
1997	115	2.61	1.12
1998	107	2.39	1.61
1999	90	1.97	0.92
2000	55	1.17	1.17
2001	54	1.14	1.34
2002	52	1.09	1.07
2003**	15	0.75	NA
2004	50	1.04	NA

*Data available for June -December 1996
 ** Data available for January -May 2003
 +Tuolumne data available from June 1999-December 2004
¹ Centers for Disease Control and Prevention. Summary of notifiable diseases—United States, 2002. Published April 30, 2004, for MMWR, 2002;51(No. 53).

(Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne), cryptosporidiosis case counts and rates have been stable for the past five years. As seen in Table 1, between 2000 and 2004, the cryptosporidiosis rate in the entire SFPUC service area ranged from 0.75 cases per 100,000 to 1.17 per 100,000. The cryptosporidiosis rate in the SFPUC service area for 2004 was 1.12 per 100,000. Total cryptosporidiosis case counts for the SFPUC service area between 2000 and 2004 ranged from 15 to 55. In 2004 the total cryptosporidiosis case count was 50. Between 2000 and 2002 rates in the SFPUC service area were similar to the rest of the U.S. Figures 1 and 2 show cryptosporidiosis case totals and rates for the entire SFPUC service area for 1996-2004.

Figure 1 Cryptosporidiosis rates

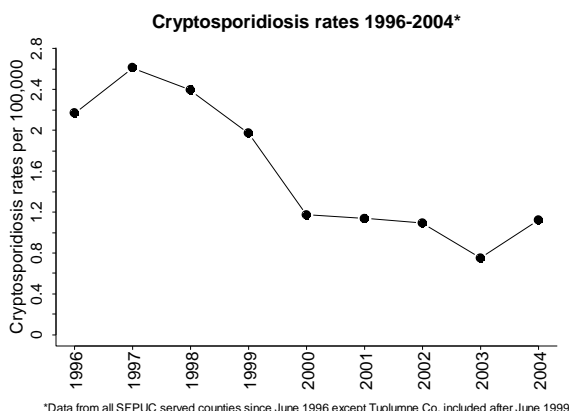
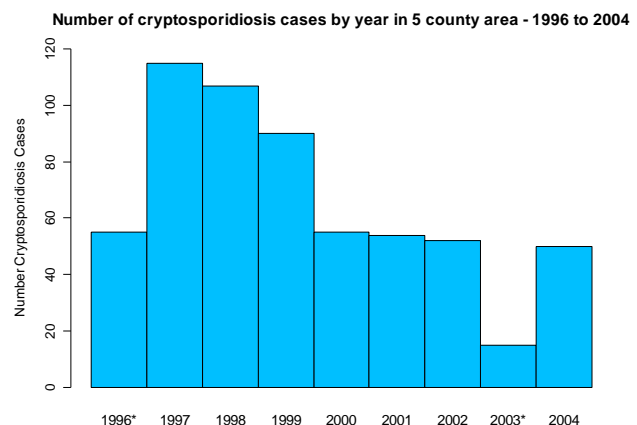


Figure 2 Cryptosporidiosis case totals



In 2004 as in previous years, San Francisco had the highest number of cases as well as the highest rate of cryptosporidiosis infection. Tuolumne County had no detected cases. Table 2 summarizes cryptosporidiosis case totals along with age in years and gender by county for January through December 2004. Figure 3 presents monthly case totals for all counties combined for January through December 2004 †. Figure 4 presents monthly population adjusted incidence rates for each county for the same time period † ‡.

Table 2 Number, age, and gender of Cryptosporidiosis cases by county January-December 2004

County	N	Age Mean (range)	Gender % Male
Alameda	5	24(1.4, 33.0)	60
San Francisco	25	37 (1.3, 54.7)	88
San Mateo	11	27 (3.0, 60.5)	73
Santa Clara	9	27(0.2, 87.0)	56
Tuolumne	0	NA	NA
Total	50	33 (0.2, 87.0)	76

Figure 3

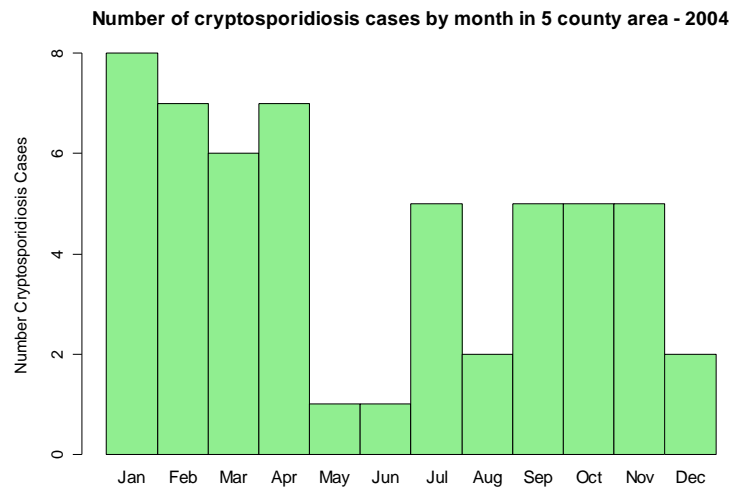
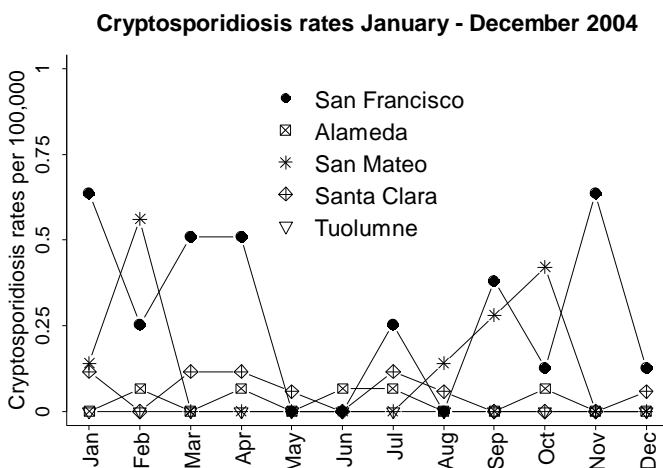


Figure 4



Next steps: Several improvements to make the cryptosporidiosis surveillance project more efficient and accurate are planned. Several of the labs participating in the cryptosporidiosis surveillance project reported that no tests were ordered in all of 2004. These labs will be contacted once every three months from now on. This will decrease the reporting burden on labs while allowing reasonable contact for surveillance purposes. In 2002-2004 no

stool tests for *Cryptosporidium* and no cases of cryptosporidiosis have been identified in Tuolumne county. SFPUC provides water to very limited areas in Tuolumne County. Surveillance in Tuolumne County will be focused on the areas where SFPUC water is used.

† Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.
 ‡ Incidence rates calculated using the following population estimates: 1996-1999 population data: State of California, Department of Finance, Revised Historical City, County and State Population Estimates, 1991-2000, with 1990 and 2000 Census Counts. Sacramento, California, March 2002. 2000-2004 population data : State of California, Department of Finance, County Population Estimates and Components of Change by County, July 1, 2000-2004. Sacramento, California, February 2005

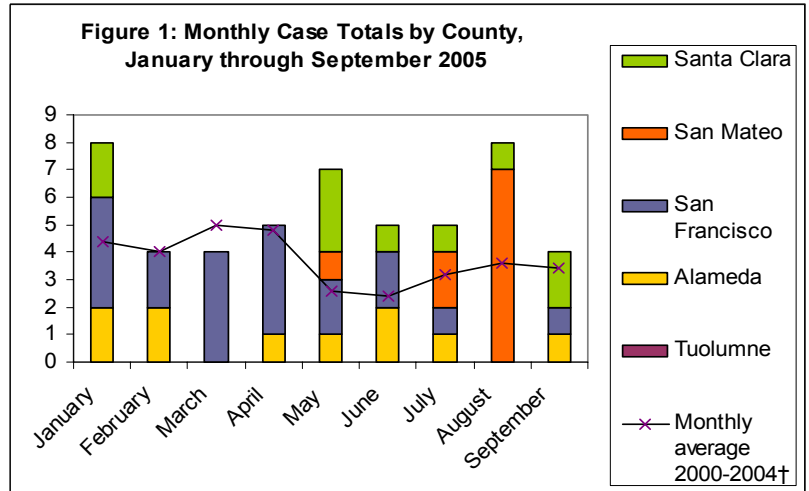


Cryptosporidiosis Surveillance Project

Quarterly Report October, 2005



Current activities: We continue to gather Cryptosporidiosis data in five Bay Area counties through ongoing collaboration with the California Emerging Infections Program (CEIP), the Communicable Disease Control Unit of SFDPH, county health departments, and participating laboratories. In the third quarter of 2005, we did not detect any outbreaks of cryptosporidiosis. An abnormal increase in cases in San Mateo County occurred in August; however, examination of the data did not reveal a common source. In September, there were no additional cases in San Mateo County signifying that there was no increased, on-going risk for cryptosporidiosis in the county. Despite this, further investigation of the August San Mateo County cases is planned.



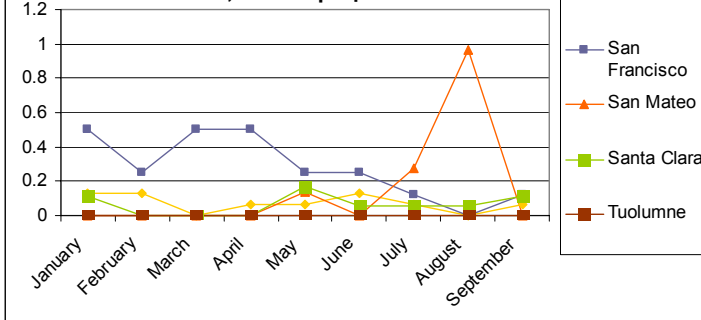
Figures and Tables:

- Figure 1 presents monthly case totals by county for January through September 2005. Historical monthly mean case totals for all counties combined are overlain on the figure†.
- Table 1 includes cryptosporidiosis case totals, average age in years and gender ratio by county for January through September 2005.
- Figure 2 summarizes Cryptosporidiosis incidence proportions by county for January through September 2005.

Table 1: Number, age, and gender of Cryptosporidiosis cases by county, January-September 2005.

County	N	Age	Gender
		Mean (range)	% Male
Alameda	10	35 (16,49)	80
San Francisco	20	39 (4,72)	95
San Mateo	10	27 (1,77)	40
Santa Clara	10	35 (2, 87)	50
Tuolumne	0	NA	NA
Total	50		

Figure 2: Cryptosporidiosis Rates Per Month Per 100,000 People‡



† Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.

‡ Incidence rates calculated using the following population estimates: State of California, Department of Finance, E-1 City / County Population Estimates, with Annual percent Change, January 1, 2004 and 2005. Sacramento, California, May 2005.

This report was created in October 2005 by the San Francisco Department of Public Health Environmental Health Section in partnership with the San Francisco Public Utilities Commission. For more information, contact michelle.kirian@sfdph.org, visit the San Francisco Department of Public Health Environmental Health website http://www.sfdph.org/phes/index_WaterEpi.htm, or the Public Utilities Commission website www.sfwater.org.

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Cryptosporidiosis Surveillance Project

Quarterly Report

October 2005



Update: Cryptosporidiosis Outbreak in NY State

According to the New York State Department of Health, last July and August a major outbreak of Cryptosporidiosis originated from a popular spray attraction at Seneca Lake State Park, NY. Since notification, officials have identified over 3 thousand possible cases and 415 laboratory confirmed cases. This multi-jurisdictional outbreak has not only affected individuals from thirty-two counties in New York State but also has resulted in cases throughout the U.S., including California, among individuals who have since left NY. Investigators are still uncertain how cryptosporidium spores were introduced into the tank that serves as a reservoir for the popular attraction; however, it has been speculated that an infected patron could have been the source. This could be possible as chlorination is ineffective at destroying spores, which infected individuals shed in their feces.

Despite the park's closure on August 15th, 2005, health professionals have been advised to be on the lookout for additional cases. Cryptosporidiosis can have an incubation period of up to 12 days and secondary

infections are common as the protozoan parasite can be transmitted through ingestion of contaminated food and water as well as contact with infected individuals and animals.

The possibility of the spread of infection from outside areas highlights the importance of gaining good exposure data and working communication between those involved in the detection and prevention of cryptosporidiosis. Cryptosporidiosis can be fatal in individuals with compromised immune systems.

References:

1. Personal communication with Pam Duncan, BSN, New York State Department of Health, September 19, 2005.
2. State Health Department, Office of State Parks Issue Update on Seneca Lake State Park Gastrointestinal Outbreak, August 26, 2005.
<http://www.health.state.ny.us/press/releases/2005/>

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Cryptosporidiosis Surveillance Project

Annual Report

2005



The Bay Area Cryptosporidiosis Surveillance Project, operating since June 1996, is a joint project between the San Francisco Public Utilities Commission (SFPUC) and Bay Area health departments. In 1989, the Environmental Protection Agency promulgated the Surface Water Treatment Rule mandating all drinking water systems supplied by surface water sources to add filtration to their water processing or to demonstrate the ability to provide high quality drinking water without filtration. At this time, only four water systems in the country, including the SFPUC, have water of sufficiently high quality that filtration is not necessary. In lieu of filtration, water utilities must continuously demonstrate their water to be of the highest standards, maintain source water protection programs and monitor for waterborne illness among their customers. The Bay Area Cryptosporidiosis Surveillance Project is a vital part of the SFPUC's water filtration avoidance agreement with the EPA.

At its inception in 1996, the Bay Area Cryptosporidiosis Surveillance project, managed by the California Emerging Infections Program, monitored cryptosporidiosis incidence in eight Bay Area counties: Alameda, Contra Costa, San Francisco, Marin, San Mateo, Santa Clara, Solano, and Sonoma. Tuolumne County was added to the surveillance system in June 1999. In 2002, surveillance in Marin, Solano, and Sonoma counties was discontinued. Since January 2004, the San Francisco Department of Public Health (SFDPH) has been coordinating cryptosporidiosis surveillance for the four counties served by the San Francisco Public Utilities Commission (SFPUC): Alameda, San Francisco, San Mateo, and Santa Clara, as well as Tuolumne County where the Hetch Hetchy reservoir, which provides 85% of SFPUC's source water, is located.

2005 Surveillance Summary: In 2005, no outbreaks of cryptosporidiosis were detected in the SFPUC service area. As in previous years, San Francisco had the highest number of cases and the highest incidence of cryptosporidiosis infection. (See Table 1) No cases were reported in

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January-December 2005

County	N	% male	Incidence per 100,000
Alameda	13	77	0.86
San Francisco	28	93	3.50
San Mateo	12	42	1.66
Santa Clara	11	36	0.63
Tuolumne	0	NA	NA
Total	64	70	1.34

Tuolumne County. In August, more cases than expected were reported from San Mateo County; however, no common source was implicated. (See Figure 1) Overall, system-wide case data

support typical transmission and susceptibility profiles: foreign travel, contact with farm animals, care of very young, old and sick, immune suppression and high risk sexual behavior.

Populations affected by cryptosporidiosis varied by county. Male cases continued to make up the majority of cases in San Francisco and Alameda Counties; however, female cases outnumbered male cases in both San Mateo and Santa Clara Counties. While the average age at diagnosis for all counties ranged from 26 to 39 years, the age distribution varied by sex and county. (See Figure 2). Table 2 presents cumulative incidence by county and age group for 2005.

Figure 1: Cryptosporidiosis Case Counts by County and Month, 2005

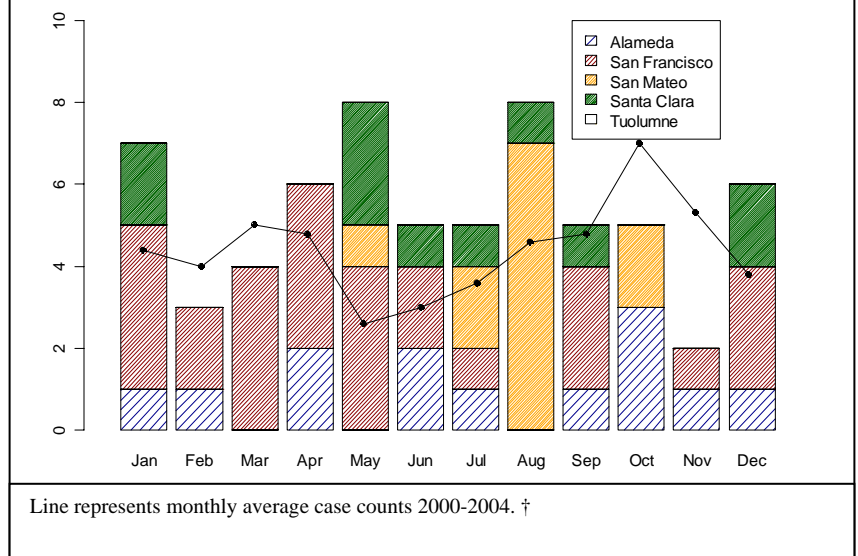
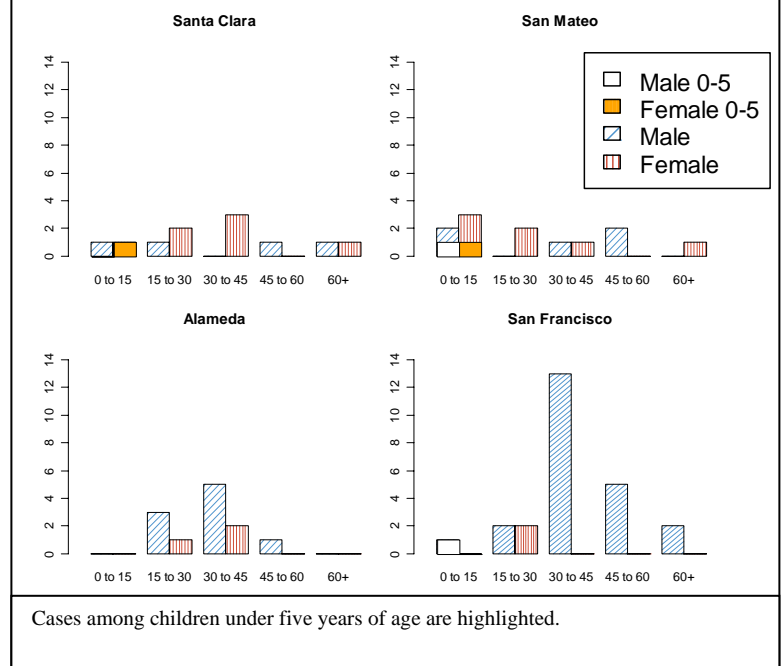


Figure 2: Case Counts by County, Age and Sex



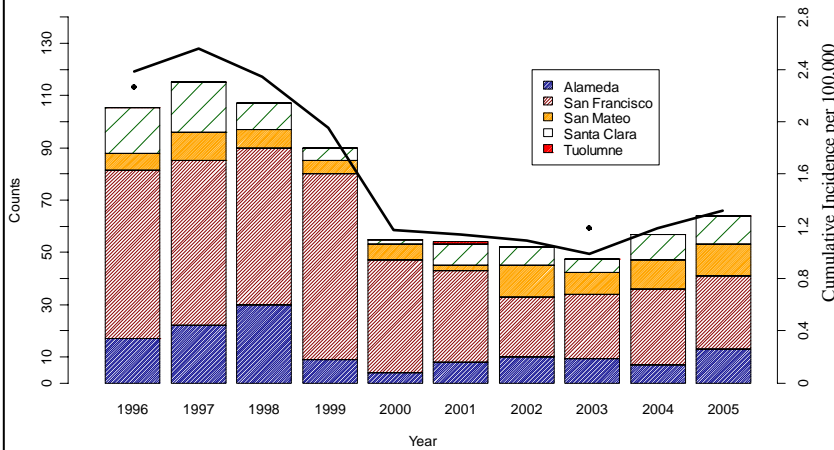
Cases among children under five years of age are highlighted.

Table 2: 2005 Cryptosporidiosis Cumulative Incidence by County and Age

County	under 5	5 to 17	18 to 64	65+
Alameda	NA	0.39	1.17	NA
San Francisco	3.14	NA	4.12	0.94
San Mateo	4.42	2.57	1.09	1.13
Santa Clara	0.84	0.67	0.54	1.25

Incidence rates were calculated using the following population estimates: U.S. Census Bureau, Census 2000 of Population and Housing, Summary File 1. Produced by the State of California Department of Finance Census Data Center.

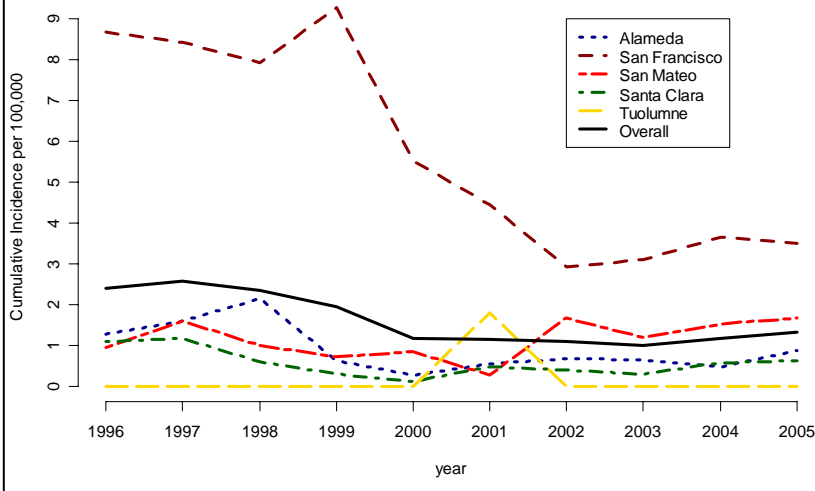
Figure 3: Cryptosporidiosis Case Counts and Cumulative Incidence, 1996-2005



Bars represent case counts per year. Line represents the one-year cumulative incidence of Cryptosporidiosis for all counties combined. ‡

- Figure adjusted for missing data 1996 and 2003.

Figure 4: Cumulative Incidence of Cryptosporidiosis by County, 1996-2005



† Alameda and San Francisco county data and historical data were obtained through the cooperation of the California Emerging Infections Program.

‡ Incidence rates were calculated using the following population estimates: 1996-1999 population data: State of California, Department of Finance, Revised Historical City, County and State Population Estimates, 1991-2000, with 1990 and 2000 Census Counts. Sacramento, California, March 2002. 2000-2004 population data: State of California, Department of Finance, County Population Estimates and Components of Change by County, July 1, 2000-2004. Sacramento, California, February 2005. 2005 population data: State of California, Department of Finance, E-1 City / County Population Estimates, with Annual Percent Change, January 1, 2004 and 2005. Sacramento, California, May 2005.

After a rapid decline in the late 1990s, the one-year cumulative incidence of cryptosporidiosis for all SFPUC service area counties combined has been relatively stable. (See Figure 3) This decline in the five-county annual cumulative incidence was most marked between 1999 and 2000, and is due largely to a reduction in cases in San Francisco; incidence in the other counties has been relatively stable since surveillance began in 1996. (See Figure 4) In 2005, the one-year cumulative incidence of cryptosporidiosis was 1.34 cases per 100,000 residents.

Next Steps: In 2006, we will be continuing our ongoing surveillance activities with attention on improving the timeliness of reporting and information dissemination and on addressing the needs of the laboratories and others who report cases to us. In addition to this, the SFPUC and SFDPH are planning drills and exercises designed to challenge and enhance our capabilities when faced with waterborne emergencies.

Special Thanks: The Cryptosporidiosis Surveillance Project would not be possible without the cooperation of the various diagnostic laboratories, the California Emerging Infections Program, San Mateo County Public Health Department, Santa Clara County Public Health Department, San Francisco County Public Health Department, Tuolumne County Public Health Department, and the San Francisco Public Utilities Commission.



Cryptosporidiosis Surveillance Project

First Quarter Report

2006



The Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in the 4 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: January through March, 2006:

During the first quarter of 2006, 22 cases of cryptosporidiosis were reported in the study area. The number of cases reported was similar to equivalent time periods in 2005 and 2004. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected between January and March of 2006.

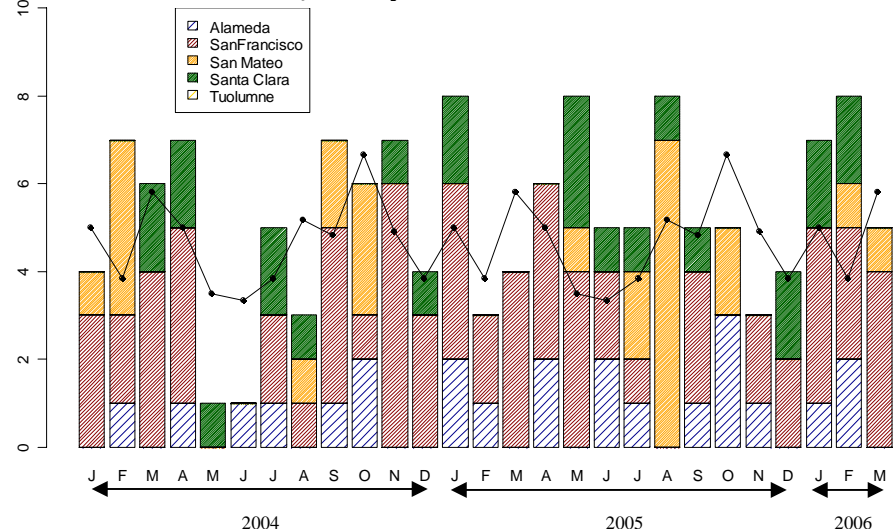
Figures and Tables:

- Figure 1 presents monthly case totals by county for January 2004 through March 2006. Historical monthly mean case totals for all counties combined are overlain on the figure†.
- Table 1 includes cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2006*.
- Figure 2 shows cryptosporidiosis case counts by county, age, and gender for January through March 2006.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January-March 2006

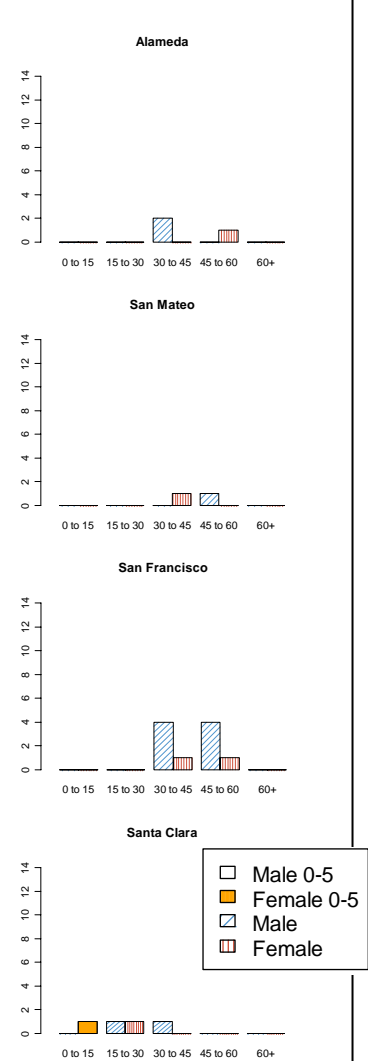
County	N	% male	Incidence per 100,000
Alameda	4	75	0.27
San Francisco	12	75	1.50
San Mateo	2	50	0.28
Santa Clara	4	50	0.23
Tuolumne	0	NA	NA
Total	22	68	0.46

Figure 1: Cryptosporidiosis Case Counts by County and Month, January 2004-March 2006



Line represents monthly average case counts 2000-2005. †

Figure 2: Case Counts by County, Age and Sex



† Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program. Monthly mean case totals were calculated using data from 2000 through 2005.

*Cumulative incidence was calculated using 2005 population estimates: State of California, Department of Finance, E-1 City / County Population Estimates, with Annual percent Change, January 1, 2004 and 2005. Sacramento, California, May 2005.

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Cryptosporidiosis Surveillance Project

Quarterly Report

2006



The Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in the 5 Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: January through June, 2006:

During the second quarter of 2006, 9 cases of cryptosporidiosis were reported in the study area. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected between January and June of 2006.

Figures and Tables:

- Figure 1 presents monthly case totals by county for January 2004 through June 2006. Historical monthly mean case totals for all counties combined are overlain on the figure†.
- Table 1 includes cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2006*.
- Figure 2 shows cryptosporidiosis case counts by county, age, and gender for January through June 2006.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January-June 2006

County	N	% male	Incidence per 100,000
Alameda	6	83	0.40
San Francisco	16	81	2.00
San Mateo	2	50	0.28
Santa Clara	5	40	0.28
Tuolumne	0	NA	NA
Total	29	72	0.60

Figure 1: Cryptosporidiosis Case Counts by County and Month, January 2004-June 2006

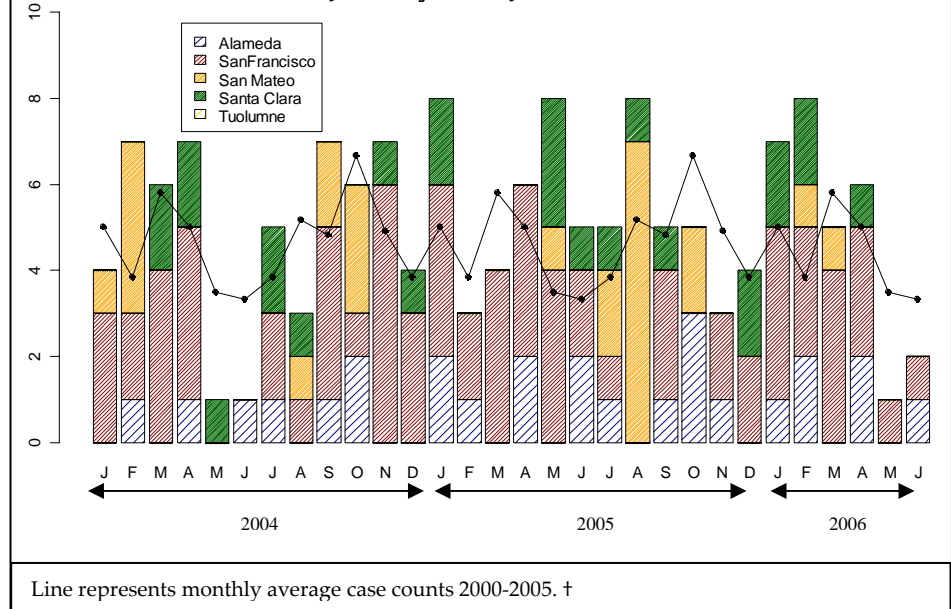
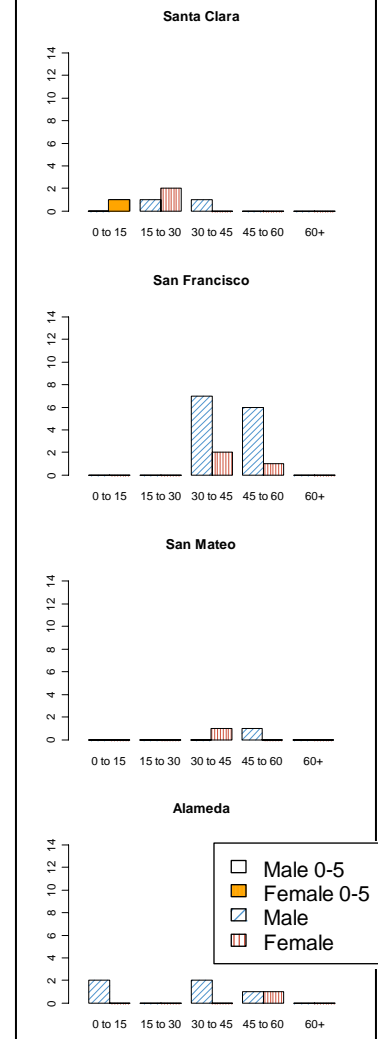


Figure 2: Case Counts by County, Age and Sex, January –June 2006



† Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program. Monthly mean case totals were calculated using data from 2000 through 2005.

*Cumulative incidence was calculated using 2006 population estimates: State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change – January 1, 2005 and 2006. Sacramento, California, May 2006

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Surveillance Summary: July through September, 2006:

In cooperation with the Santa Clara County Health Department, an outbreak of cryptosporidiosis was identified in August 2006. Case investigations and subsequent water sampling identified an interactive fountain in San Jose as the source. From July through September of 2006, a total of 73 cases of cryptosporidiosis were reported, 14 cases reported direct contact with the San Jose fountain. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected between July and September of 2006.

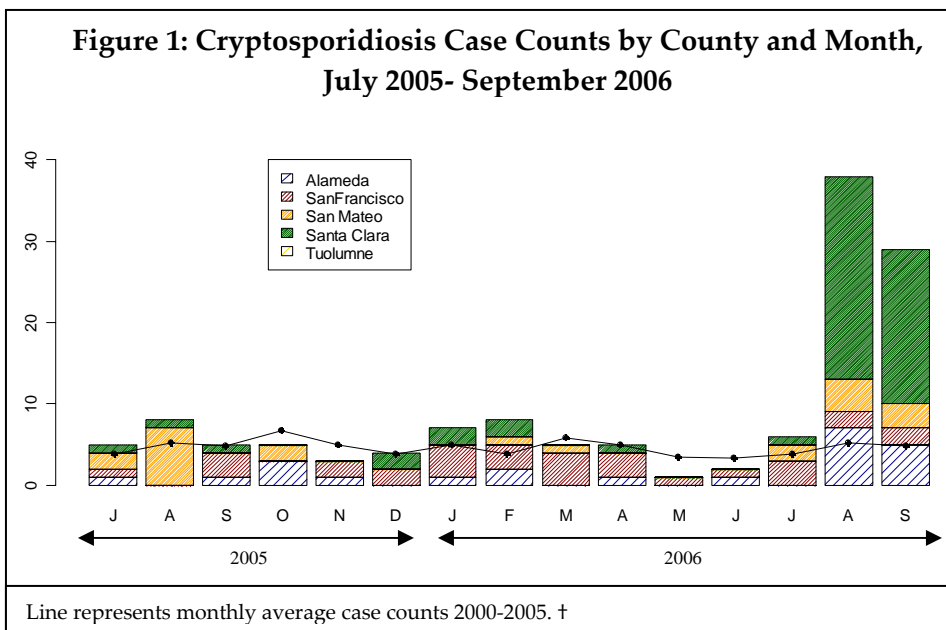
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- Table 1 includes cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2006*.
- Figure 2 shows cryptosporidiosis case counts by county, age, and gender for January through September 2006.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January-September 2006

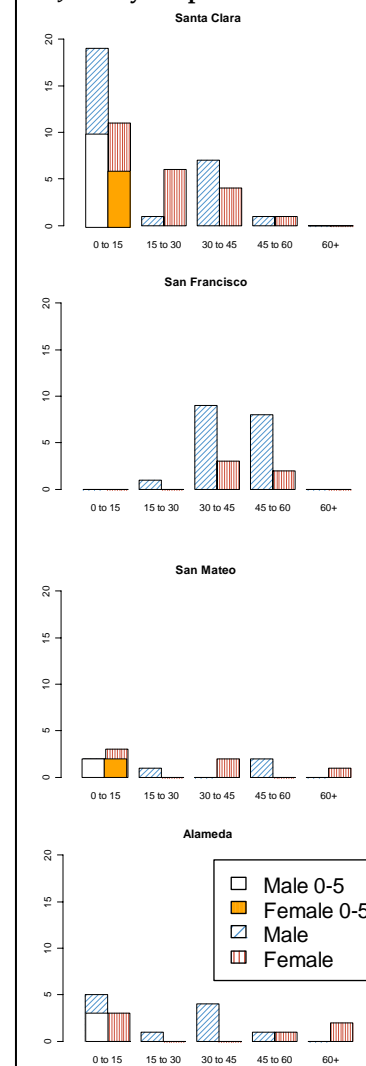
County	N	% male	Incidence per 100,000
Alameda	17	68	1.26
San Francisco	23	78	2.88
San Mateo	11	45	1.52
Santa Clara	50	56	2.82
Tuolumne	0	NA	NA
Total	101	61	2.08

Figure 1: Cryptosporidiosis Case Counts by County and Month, July 2005- September 2006



Line represents monthly average case counts 2000-2005. †

Figure 2: Case Counts by County, Age and Sex, January –September 2006



†Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program. Monthly mean case totals were calculated using data from 2000 through 2005.
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The Bay Area Cryptosporidiosis Surveillance Project

Annual Report

2006



The Bay Area Cryptosporidiosis Surveillance Project (CSP), operating since June 1996, is a joint project between the San Francisco Public Utilities Commission (SFPUC) and Bay Area health departments. In 1989, the Environmental Protection Agency promulgated the Surface Water Treatment Rule mandating all drinking water systems supplied by surface water sources to add filtration to their water processing or to demonstrate the ability to provide high quality drinking water without filtration. At this time, the SFPUC is one of only a handful of large water systems that have water of sufficiently high quality that filtration is not necessary. In lieu of filtration, water utilities must continuously demonstrate their water to be of the highest standards, maintain source water protection programs and monitor for waterborne illness among their customers. The Bay Area Cryptosporidiosis Surveillance Project is a vital part of the SFPUC's water filtration avoidance agreement with the EPA.

At its inception in 1996, CSP, managed by the California Emerging Infections Program, monitored cryptosporidiosis incidence in eight Bay Area counties: Alameda, Contra Costa, San Francisco, Marin, San Mateo, Santa Clara, Solano, and Sonoma. Tuolumne County was added to the surveillance system in June 1999. In 2002, surveillance in Marin, Solano, and Sonoma counties was discontinued. Since January 2004, the San Francisco Department of Public Health has been coordinating cryptosporidiosis surveillance for the five counties served by the SFPUC: Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne County, where the Hetch Hetchy reservoir, which provides 85% of SFPUC's source water, is located.

2006 Surveillance Summary: In 2006, no outbreaks of cryptosporidiosis attributable to drinking water were detected in the SFPUC service area. However, in August, CSP detected a non-drinking water associated cryptosporidiosis outbreak predominately affecting Santa Clara County. CSP collaborated with the Santa Clara County Public Health Department (SCCPHD) in the outbreak investigation.

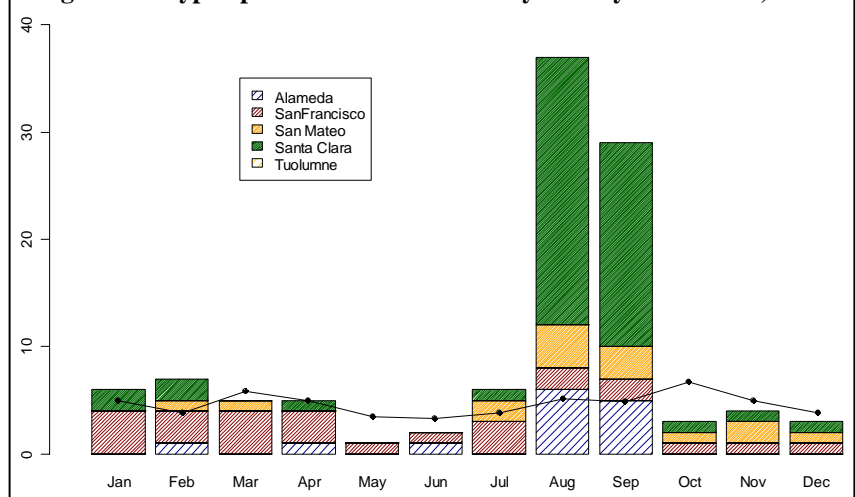
Cryptosporidiosis Outbreak Summary: Of the 108 cases reported to CSP in 2006, 69 were reported between August 11th and October 9th. Table 1 presents data for the outbreak cases. The majority of cases, 45, were residents of Santa Clara County. No cases resided in Tuolumne County. Almost 60% of outbreak cases were under 15 years of age. Sixteen of the 65 interviewed cases attended one interactive water fountain. Based on physical inspection, the fountain was closed by Santa Clara County Department of Environmental Health on August 25, 2006. Subsequent water testing at the interactive fountain by the Santa Clara Valley Water District revealed *Cryptosporidium* oocysts in the re-circulating water. As most cases did not report direct contact with the fountain, additional measures were taken to minimize spread within the community; SCCPHD sent out physician alerts and restricted school attendance by sick children.

Table 1: Cryptosporidiosis Outbreak Case Characteristics

Cases	N	% Male	Age	
			Median	min,max
Santa Clara	45	58	7	0, 57
Alameda	11	55	11	1, 88
San Mateo	8	63	14	1, 47
San Francisco	5	80	49	33, 66
Total	69	59	11	0, 88

All cases: Overall, the number of cases reported each month in 2006, except August and September, did not surpass what is expected given the low endemicity of cryptosporidiosis in the Bay Area. Figure 1 displays case counts by month and county. In 2006, males continued to constitute the majority of cases in Alameda and San Francisco Counties, although by a reduced margin compared to previous years. In San Mateo and Santa Clara Counties, an increased proportion of cases were male as compared to 2005. Due to the outbreak in August and September, one -year cumulative incidences for all counties except San Francisco, which consistently experiences the highest one-year cumulative incidence, were elevated in 2006. Table 2 presents data for all cases reported in 2006. Except for San Francisco County, close to 50 percent of cases in each county occurred among children under 15 years of age. Figure 2 shows case counts by county, age and sex. Cumulative incidences by county and age also reflect increased cases among younger residents in Alameda, Santa Clara and San Mateo Counties. Most notably, children under five years of age in Santa Clara and San Mateo Counties had one-year cumulative incidences of 13.39 and 11.05 cases per 100,000 residents, respectively. In 2005, the one-year cumulative incidences for children under five years of age in Santa Clara and San

Figure 1: Cryptosporidiosis Case Counts by County and Month, 2006



Line represents monthly average case counts 2000-2005. †

Table 2: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January-December 2006

County	N	% male	Incidence per 100,000
Alameda	14	57	0.93
San Francisco	26	81	3.26
San Mateo	15	60	2.07
Santa Clara	53	55	2.99
Tuolumne	0	NA	NA
Total	108	62	2.22

Mateo counties were 0.84 and 4.42 cases per 100,000. Table 3 presents cumulative incidences by county and age.

After a rapid decline in the late 1990s, the one-year cumulative incidence of cryptosporidiosis for all SFPUC service area counties combined has been relatively stable. Figure 3 displays cryptosporidiosis case counts by year and county for 1996 through 2006. This decline in the five-county annual cumulative incidence was most marked between 1999 and 2000, and is due largely to a reduction in cases in San Francisco County. The increases in the five-county annual case total and cumulative incidence to 1990s levels seen in 2006 is due entirely to the August, Santa Clara County outbreak. In 2006, the one-year, five county cumulative incidence of cryptosporidiosis was 2.22 cases per 100,000 residents.

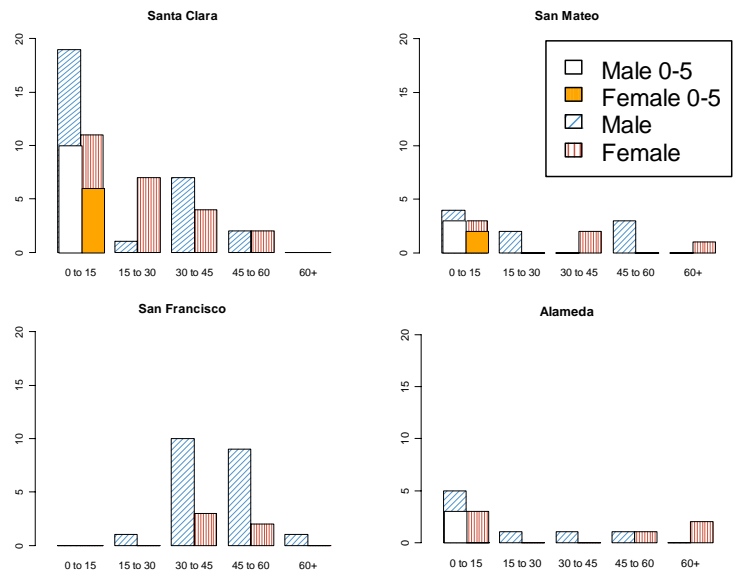
Next Steps: In 2006, CSP held two practice activities designed to improve our emergency preparedness. In 2007, we will be revising our written emergency protocols based on the lessons learned during those activities.

Special Thanks: The Cryptosporidiosis Surveillance Project would not be possible without the cooperation of the various diagnostic laboratories, the California Emerging Infections Program, San Mateo County Public Health Department, Santa Clara County Public Health Department, City and County of San Francisco Department of Public Health, Tuolumne County Public Health Department and the San Francisco Public Utilities Commission.

† Alameda and San Francisco county data and historical data were obtained through the cooperation of the California Emerging Infections Program.

‡ Incidence rates were calculated using the following population estimates: 1996-1999 population data: State of California, Department of Finance, Revised Historical City, County and State Population Estimates, 1991-2000, with 1990 and 2000 Census Counts. Sacramento, California, March 2002. 2000-2004 population data: State of California, Department of Finance, County Population Estimates and Components of Change by County, July 1, 2000-2004. Sacramento, California, February 2005. 2005 population data: State of California, Department of Finance, E-1 City / County Population Estimates, with Annual percent Change, January 1, 2004 and 2005. Sacramento, California, May 2005. 2006 population data: State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2005 and 2006. Sacramento, California, May 2006

Figure 2: Case Counts by County, Age and Sex



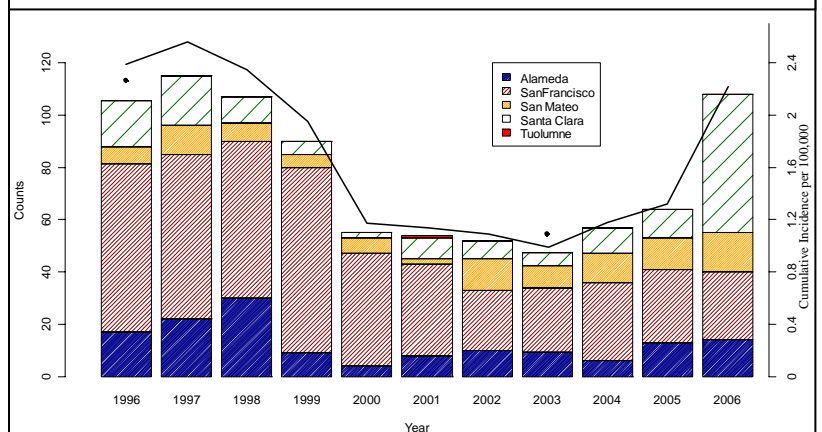
Cases among children under five years of age are highlighted.

Table 3: 2006 Cryptosporidiosis Cumulative Incidence by County and Age

County	under 5	5 to 17	18 to 64	65+
Alameda	3.06	2.35	0.42	0.68
San Francisco	NA	NA	4.48	0.94
San Mateo	11.05	2.57	1.31	1.13
Santa Clara	13.39	4.07	2.08	NA

Incidence rates were calculated using population estimates from: U.S. Census Bureau, Census 2000 of Population and Housing, Summary File 1. Produced by the State of California Department of Finance Census Data Center.

Figure 3: Cryptosporidiosis Case Counts and Cumulative Incidence 1996-2006



Bars represent case counts per year. Line represents the one-year cumulative incidence of Cryptosporidiosis for all counties combined.†

• Figure adjusted for missing data 1996 and 2003.

This report was created in January 2007 by the San Francisco Department of Public Health Environmental Health Section in partnership with the San Francisco Public Utilities Commission. For more information, contact michelle.kirian@sfdph.org, visit the San Francisco Department of Public Health Environmental Health Section website: www.sfdph.org/phes/water, or the Public Utilities Commission website: www.sfwater.org. 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.



Cryptosporidiosis Surveillance Project

First Quarter Report

2007

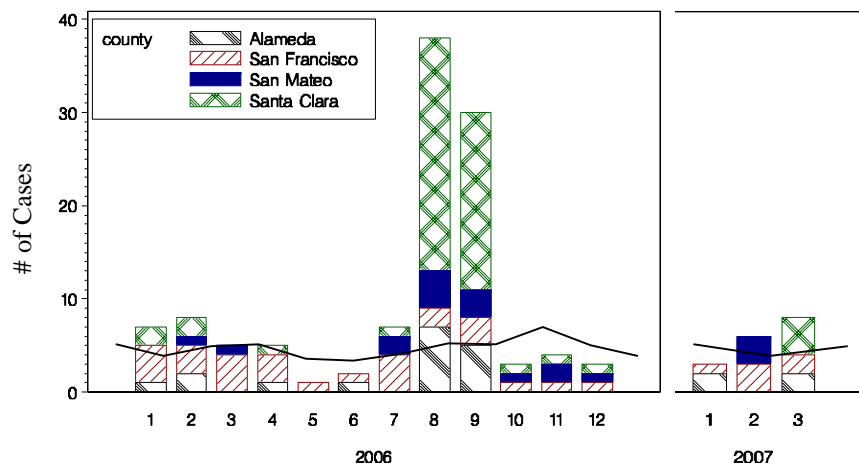


The Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in the 5 Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: First Quarter 2007:

During the first quarter of 2007, 17 cases of cryptosporidiosis were reported in the study area. The number of cases reported was similar to equivalent time periods in 2006, 2005 and 2004 (not shown). No system-wide, drinking water associated cryptosporidiosis outbreaks were detected between January and March of 2007.

Figure 1: Cryptosporidiosis Case Counts by County and Month, January 2006-March 2007



Line represents monthly average case counts 2000-2005. *

Figures and Tables:

- Figure 1 presents monthly case totals by county for January 2006 through March 2007. Historical monthly mean case totals for all counties combined are overlain on the figure.
- Table 1 includes cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2007.
- Table 2 presents cryptosporidiosis case counts by county, gender and age group for January through March 2007.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January-March 2007

County	N	% Male	Cumulative Incidence per 100,000 [‡]
San Mateo	3	33	0.41
Alameda	4	100	0.26
Santa Clara	4	75	0.23
San Francisco	6	67	0.75
Tuolumne	0	NA	NA
Total	17	71	0.35

Table 2: Case Counts by County, Sex, and Age Group, January – March 2007

County	Sex	16 to 30	31 to 45	6 to 15	60+
Alameda	male	4	0	0	0
San Francisco	female	0	1	1	0
	male	1	0	3	0
San Mateo	female	1	1	0	0
	male	0	0	1	0
Santa Clara	female	0	0	1	0
	male	1	1	0	1

* Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program. Monthly mean case totals were calculated using data from 2000 through 2005.

‡ Cumulative incidences were calculated using the following population estimates: 2004 population data : State of California, Department of Finance, County Population Estimates and Components of Change by County, July 1, 2000-2004. Sacramento, California, February 2005. 2005 population data: State of California, Department of Finance, E-1 City / County Population Estimates, with Annual percent Change, January 1, 2004 and 2005. Sacramento, California, May 2005. 2006 population data: State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change – January 1, 2005 and 2006. Sacramento, California, May 2006

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Cryptosporidiosis Surveillance Project

Second Quarter Report

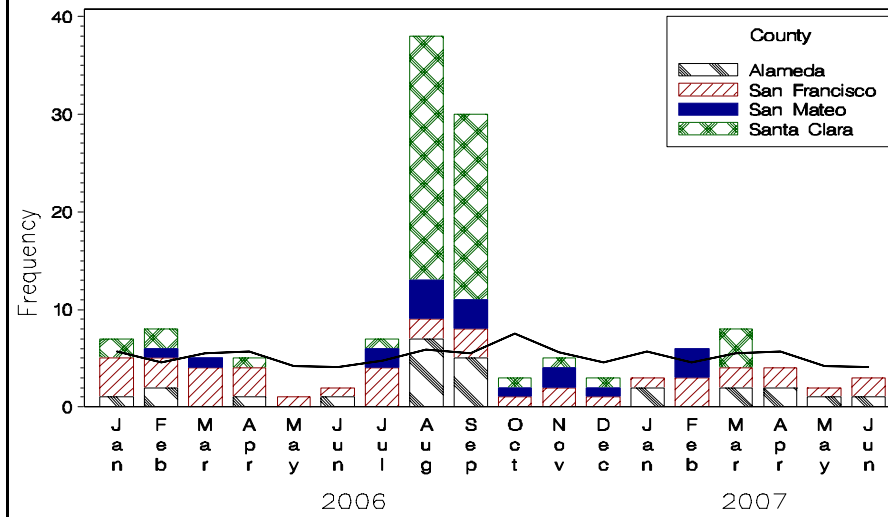
2007



The Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in the 5 Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

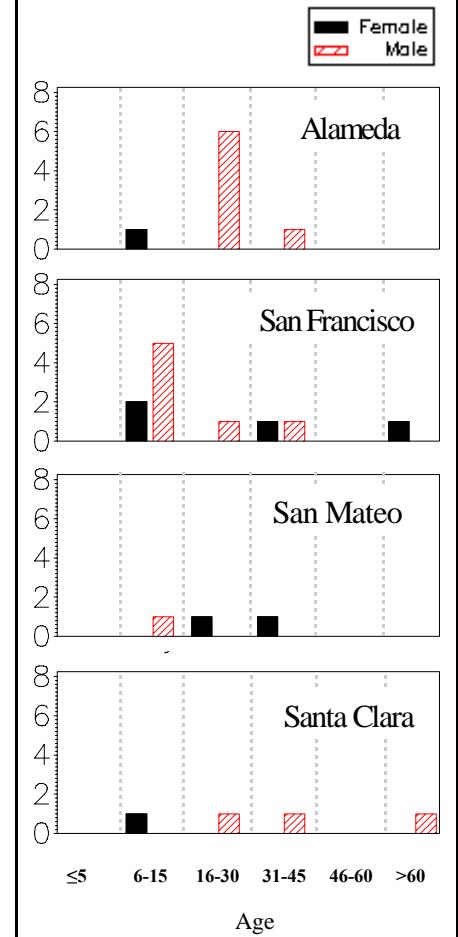
Surveillance Summary: Second Quarter 2007: During the second quarter of 2007, 9 cases of cryptosporidiosis were reported in the study area. During each month of the second quarter, the number of cases reported was lower than the respective historical monthly averages for years 2000 through 2005. (See Figure 1) From January through June of 2007 a total of 26 cases have been reported; no system-wide, drinking water associated cryptosporidiosis outbreaks were detected.

Figure 1: Cryptosporidiosis Case Counts by County and Month, January 2006-June 2007



Line represents monthly mean case counts 2000-2005.

Figure 2: Case Counts by County, Age and Sex, January-June 2007



County	N	% Male	Cumulative Incidence per 100,000 [‡]
Tuolumne	0	NA	NA
San Mateo	3	33	0.41
Santa Clara	4	75	0.22
Alameda	8	88	0.52
San Francisco	11	64	1.36
Total	26	69	0.53

Figures and Tables:

- Table 1 includes cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2007.
- Figure 1 presents monthly case totals by county for January 2006 through June 2007. Historical monthly mean case totals for all counties combined are overlain on the figure.
- Figure 2 presents cryptosporidiosis case counts by county, age group and sex for January through June 2007.

[†] Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.

[‡] 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, 2006 and 2007. Sacramento, California, May 2007.

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Cryptosporidiosis Surveillance Project

Third Quarter Report

2007

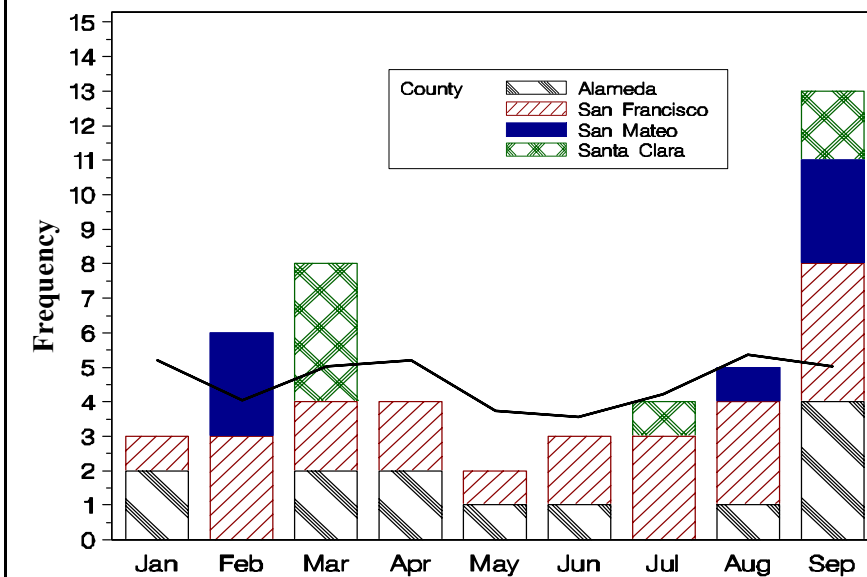


The Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in Bay Area Counties served by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Third Quarter 2007:

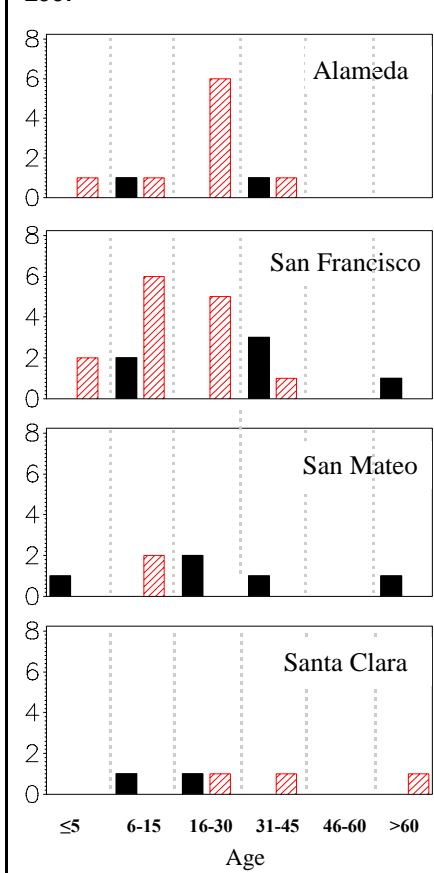
During the third quarter of 2007, 22 cases of cryptosporidiosis were reported in the study area. In September, the number of cases reported was higher than the respective historical monthly average for years 2000 through 2005. (See Figure 1) No common exposures were identified among cases in September. From January through September of 2007 a total of 48 cases have been reported; no system-wide, drinking water associated cryptosporidiosis outbreaks were detected.

Figure 1: Cryptosporidiosis Case Counts by County and Month, January 2007-September 2007



Line represents monthly mean case counts 2000-2005. Data from 2006 have been omitted due to a recreational water associated outbreak in August, September and October, 2006.*

Figure 2: Case Counts by County, Age and Sex, January- September 2007



County	N	% Male		Cumulative Incidence per 100,000 [‡]
		N	%	
Tuolumne	0	NA	NA	NA
San Mateo	7	29	0.95	
Santa Clara	7	57	0.39	
Alameda	13	77	0.85	
San Francisco	21	65	2.60	
Total	48	65	0.97	

Figures and Tables:

- Table 1 includes cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2007.
- Figure 1 presents monthly case totals by county for January 2007 through September 2007. Historical monthly mean case totals for all counties combined are overlain on the figure.
- Figure 2 presents cryptosporidiosis case counts by county, age group and sex for January through September 2007.

* Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.

‡ 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, 2006 and 2007. Sacramento, California, May 2007.

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Cryptosporidiosis Surveillance Project

Annual Report

2007



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:

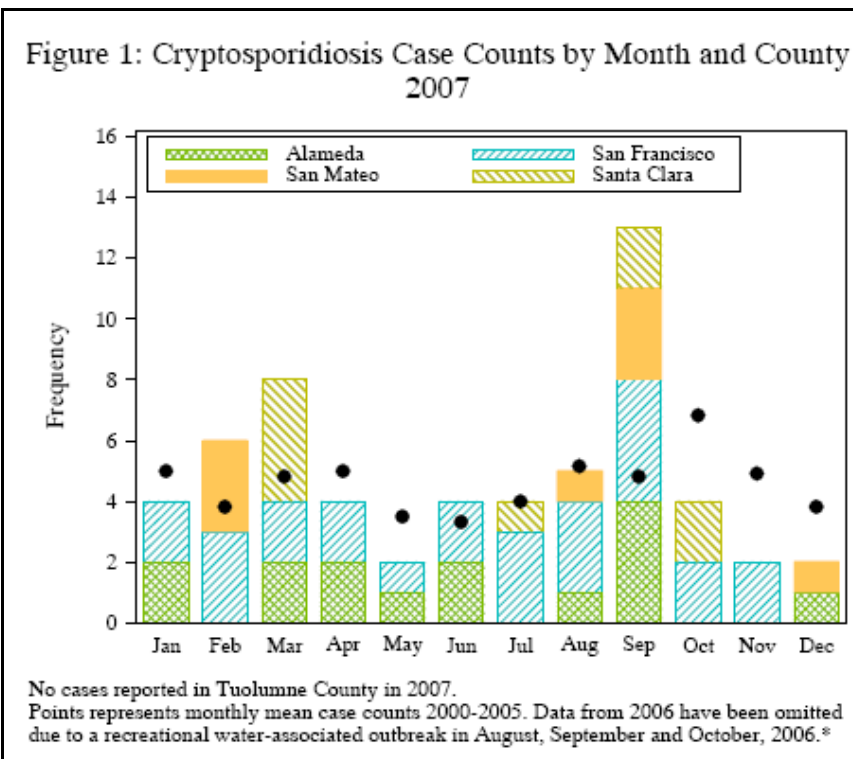
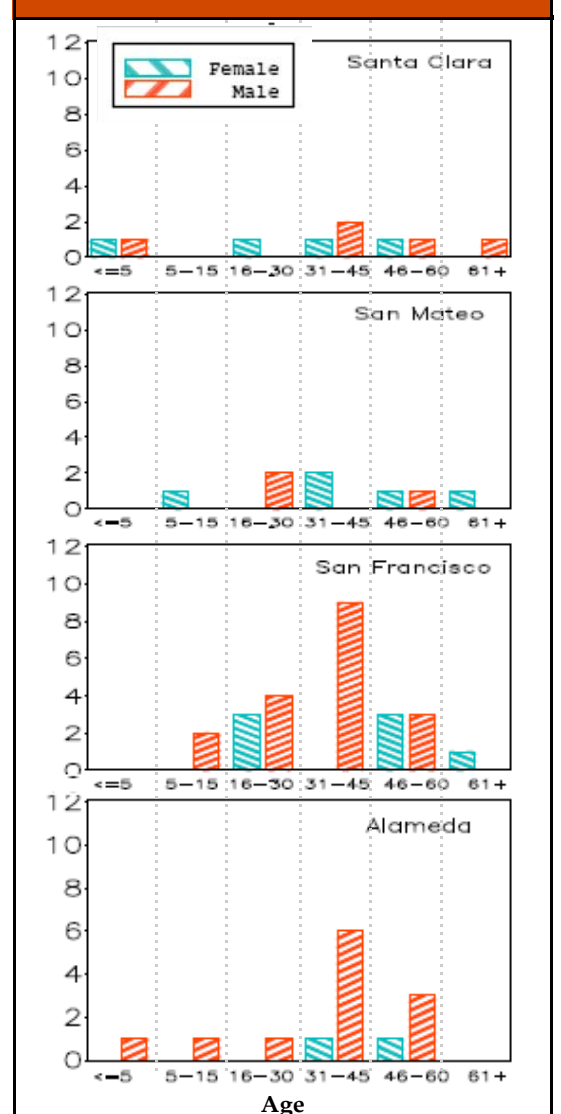
Fourth Quarter 2007: During the fourth quarter of 2007, 8 cases of cryptosporidiosis were reported in the study area. (Figure 1) The number of cases reported each month was below the historical mean number of cases reported for each given month from 2000-2005.

2007 Surveillance: In 2007 a total of 57 cases were reported; no system-wide, drinking water associated cryptosporidiosis outbreaks were detected. In September the number of cases exceeded the expected, however no common exposures were identified among cases. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to 25 cases or 3.09 cryptosporidiosis cases per 100,000 residents in San Francisco County (Table 1). Figure 2 presents case counts by county, age and gender.

Table 1: Number and Cumulative Incidence by County, 2007

County	N	Cumulative Incidence per 100,000 [‡]
Tuolumne	0	NA
San Mateo	8	1.09
Santa Clara	9	0.50
Alameda	15	0.98
San Francisco	25	3.09
Total	57	1.16

Figure 2: Case Counts by County, Age and Sex, 2007



[†] Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.
[‡] 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, 2006 and 2007. Sacramento, California, May 2007.

Cryptosporidiosis Case Demographics and Risk Factors

In 2007, 27 (48%) of cryptosporidiosis cases were white and 38 (67%) were male. Data on race/ethnicity were not collected for a 14 (25%) 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 2007, one reported contact with a confirmed cryptosporidiosis case during the incubation period. Six reported contact with a suspected case. Seventeen (47%) cases over age 15 reported sexual contact during the incubation period. Of these 11 were male; seven (21%) male cases reported MSM activity. Thirteen (28%) cases reported a compromised immune status. While 17 (30%) cases reported contact with animals during the incubation period, only two had contact with farm or non-domesticated animals. Thirteen (23%) cases reported foreign travel; 12 of these were to a developing nation. Ten cases reported any recreational water exposure during the incubation period. Table 3 presents risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County	
	N (%)by County
Alameda	
Male	12 (80%)
White	7 (47%)
Other Race/Ethnicity	1 (7%)
Unknown Race/Ethnicity	7 (47%)
San Francisco	
Male	18 (72%)
Black	2 (8%)
Asian	1 (4%)
White	12 (48%)
Hispanic	4 (16%)
Other Race/Ethnicity	1 (4%)
Unknown Race/Ethnicity	5 (20%)
San Mateo	
Male	3 (38%)
Asian	1 (13%)
White	5 (63%)
Hispanic	1 (13%)
Unknown Race/Ethnicity	1 (13%)
Santa Clara	
Male	5 (56%)
Black	1 (11%)
Asian	1 (11%)
White	3 (33%)
Hispanic	3 (33%)
Unknown Race/Ethnicity	1 (11%)

Table 3: Percentage of Cases by County with Know Risk Factors During the Incubation Period.			
Risk Factor	County	N	(%)
Contact with Confirmed Case	San Francisco	1	(6%)
	Santa Clara	1	(14%)
	Alameda	4	(36%)
Daycare	San Francisco	1	(6%)
	Santa Clara	1	(14%)
	San Mateo	1	(14%)
	Alameda	4	(36%)
	San Mateo	1	(14%)
Workcare	San Mateo	1	(14%)
	Alameda	1	(9%)
Sexual Activity*	San Francisco	9	(39%)
	Santa Clara	1	(14%)
	San Mateo	4	(57%)
	Alameda	3	(25%)
MSM**	San Francisco	6	(38%)
	Alameda	1	(10%)
Immune Suppression***	San Francisco	8	(42%)
	Santa Clara	1	(14%)
	Alameda	4	(33%)
Non-Domestic Animal Contact	San Francisco	1	(4%)
	Alameda	1	(7%)
Foreign Travel	San Francisco	3	(12%)
	Santa Clara	4	(44%)
	San Mateo	1	(13%)
	Alameda	5	(33%)
Recreational Water Contact	San Francisco	2	(8%)
	Santa Clara	2	(22%)
	San Mateo	2	(25%)
	Alameda	4	(27%)

* Denominator includes cases over 15 years
 ** Denominator includes male cases over 15 years
 ***all immuno-compromised cases in 2007 were men.

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. For more information on CSP data collection and methods used to calculate timeliness please see "Timeliness of Cryptosporidiosis Reporting" online at http://dphwww.sfdph.org/phes/water/water_publications.htm.

In 2007, CSP received case notification of positive cryptosporidium laboratory results for 50% of the 57 cases within six days of specimen collection. This figure does not adjust for weekends, holidays or time required for specimen processing. Time-to-reporting was consistent throughout the year with very little variation from quarter to quarter; median days-to-reporting were between five and seven days per quarter. (Table 4). Median report times by county in 2007 were similar to 2006 (data not shown). Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 77% of cases in 2007. Interviews were completed within three days of notification for 50% of all interviewed cases.

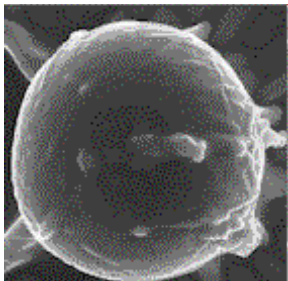


Table 4: Median Days between Specimen Collection and Report to CSP, 2007

	N	Median	Min	Max
2007	57	6	0	160
Quarter				
Quarter 1	17	5	2	17
Quarter 2	10	7	1	160
Quarter 3	22	6	0	28
Quarter 4	8	5	1	12
Informant				
California Emerging Infections program	11	7	3	17
Physician	1	4	4	4
Clinical Diagnostic Laboratory	35	7	1	28
County Health Department	9	3	0	12
California Department of Public Health	1	160	160	160
County				
Alameda	15	7	4	160
San Francisco	25	7	0	28
San Mateo	8	5	2	12
Santa Clara	9	3	1	6

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2007

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	7	7	4	17
	Physician	1	4	4	4
	Clinical Diagnostic Laboratory	6	7	5	8
	California Department of Public Health	1	160	160	160
	Quarter 1	4	8	4	17
San Francisco	Quarter 2	5	8	4	160
	Quarter 3	5	7	6	7
	Quarter 4	1	7	7	7
	California Emerging Infections Program	4	6	3	12
	Clinical Diagnostic Laboratory	20	8	1	28
San Mateo	San Mateo County Health Services Agency	1	0	0	0
	Quarter 1	6	10	2	17
	Quarter 2	5	6	1	9
	Quarter 3	10	8	0	28
	Quarter 4	4	9	1	12
Santa Clara	Clinical Laboratory	6	3	2	7
	San Mateo County Health Services Agency	2	9	6	12
	Quarter 1	3	3	2	7
	Quarter 2	0	NA	NA	NA
	Quarter 3	4	6	3	12
Santa Clara	Quarter 4	1	3	3	3
	Clinical Diagnostic Laboratory	3	4	2	6
	Santa Clara County Public Health Department	6	3	1	6
	Quarter 1	4	4	2	6
	Quarter 2	0	NA	NA	NA
Santa Clara	Quarter 3	3	4	3	6
	Quarter 4	2	2	1	2

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Cryptosporidiosis Surveillance Project

First Quarter Report

2008

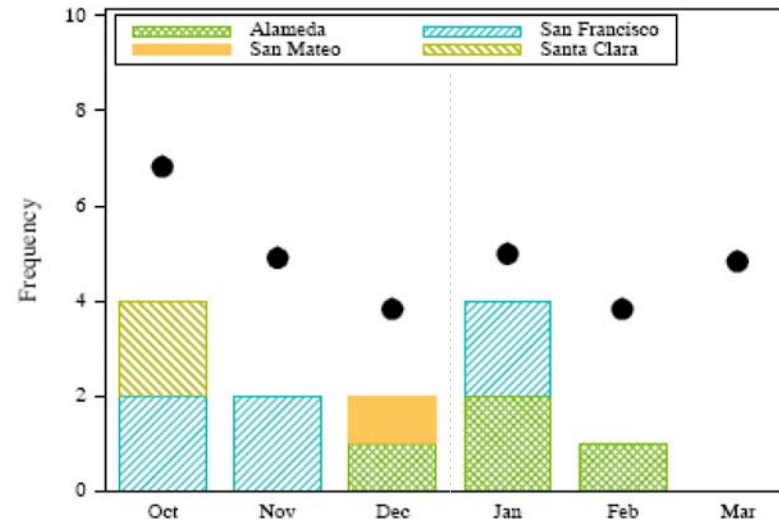


The Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in Bay Area Counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: First Quarter 2008: During the first quarter of 2008, 5 cases of cryptosporidiosis were reported in the study area. Total cases per month did not exceed respective historic monthly mean counts. Of the five reported cases, three reside in areas served by the San Francisco Public Utilities Commission. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected.

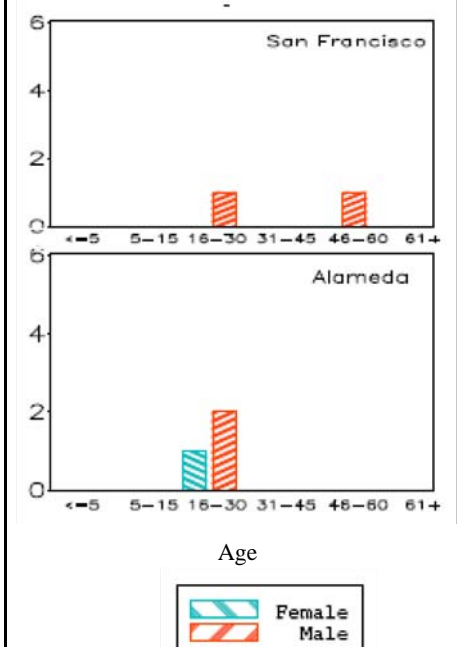
County	N	% Male		Cumulative Incidence per 100,000 [‡]
Tuolumne	0	NA	NA	NA
San Mateo	0	NA	NA	NA
Santa Clara	0	NA	NA	NA
Alameda	3	67	0.20	
San Francisco	2	100	0.25	
Total	5	80	0.10	

Figure 1: Cryptosporidiosis Case Counts by Month and County
October 2007 - March 2008



No cases reported in Tuolumne County.
Points represents monthly mean case counts 2000-2005. Data from 2006 have been omitted due to a recreational water-associated outbreak in August, September and October, 2006.*

Figure 2: Case Counts by County, Age and Sex.
January– March 2008



*No cases reported in San Mateo, Santa Clara and Tuolumne Counties.
* Missing data for one Alameda County case.

[†] Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.
[‡] 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, 2006 and 2007. Sacramento, California, May 2007.

Graphics and Tables:

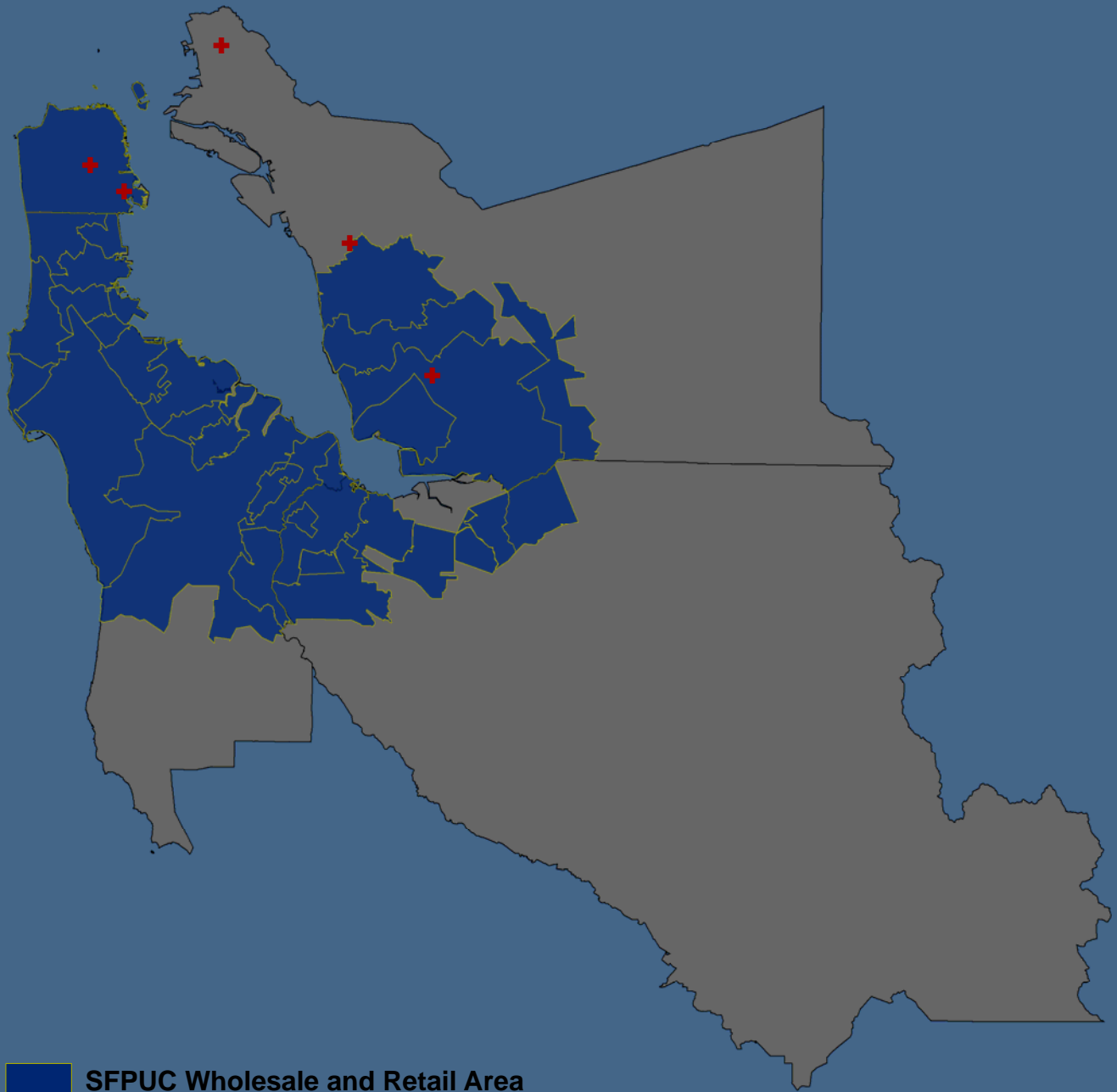
- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for the first quarter of 2008.
- Figure 1: Monthly case totals by county for the fourth quarter of 2007 (October-December) and the first quarter of 2008 (January-March). Historical monthly mean case totals for all counties combined are overlain on the figure.
- Figure 2: Cryptosporidiosis case counts by county, age group and sex for the first quarter of 2008.
- Map: Cryptosporidiosis case residence by drinking water source.




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The Cryptosporidiosis Surveillance Project

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



-  SFPUC Wholesale and Retail Area
-  Other Drinking Water Sources
-  Cases Q1 2008

The Cryptosporidiosis Surveillance Project area includes Alameda, San Francisco, San Mateo, Santa Clara and Tuolumne Counties. No cases were reported in Tuolumne County. Tuolumne County is not shown on the map.



Cryptosporidiosis Surveillance Project

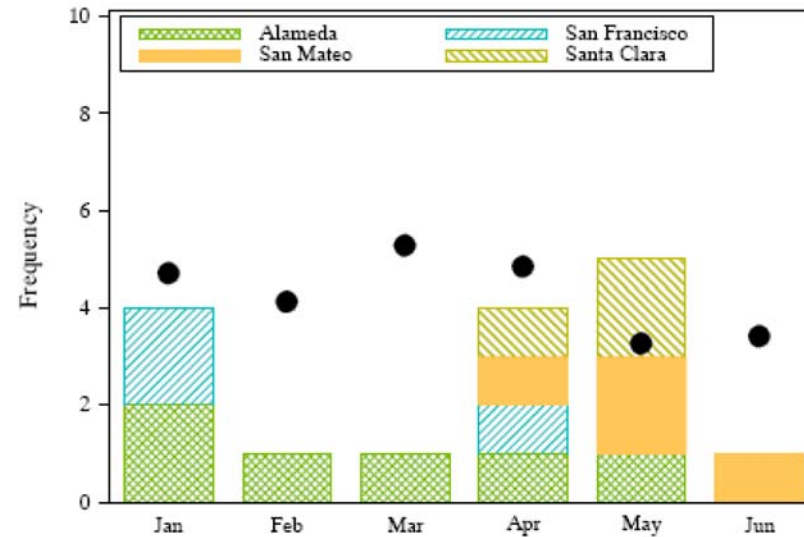
January-June
2008



The Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in Bay Area Counties served in part or completely 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.

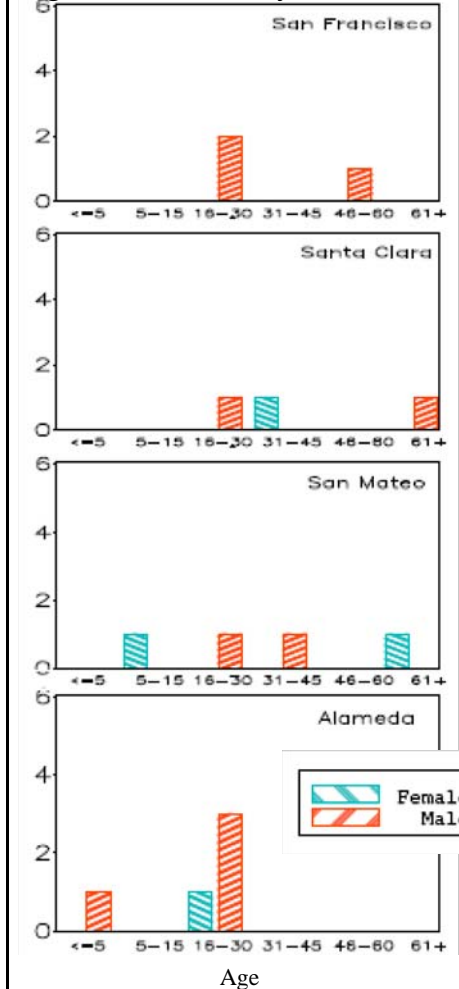
Surveillance Summary: January– June 2008: During the first six months of 2008, 16 cases of cryptosporidiosis were reported in the study area. Ten cases were reported in April, May and June. Of these 10 cases, seven resided in areas served by the San Francisco Public Utilities Commission. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected.

Figure 1: Cryptosporidiosis Case Counts by Month and County 2008



No cases reported in Tuolumne County.
Points represent monthly mean case counts 2000-2005 and 2007. Data from 2006 have been omitted due to a recreational water-associated outbreak in August, September and October, 2006.*

Figure 2: Case Counts by County, Age and Sex. January– June 2008



* Missing data for one Alameda County case.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January –June 2008

County	N	% Male	Cumulative Incidence per 100,000 [‡]
Tuolumne	0	NA	NA
San Mateo	4	50	0.54
Santa Clara	3	67	0.16
Alameda	6	83	0.39
San Francisco	3	100	0.36
Total	16	75	0.32

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county.
- Figure 1: Monthly case totals by county. Historical monthly mean case totals for all counties combined are overlain on the figure.
- Figure 2: Cryptosporidiosis case counts by county, age group and sex.
- Map: Cryptosporidiosis case residence by drinking water source.

[†] Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.

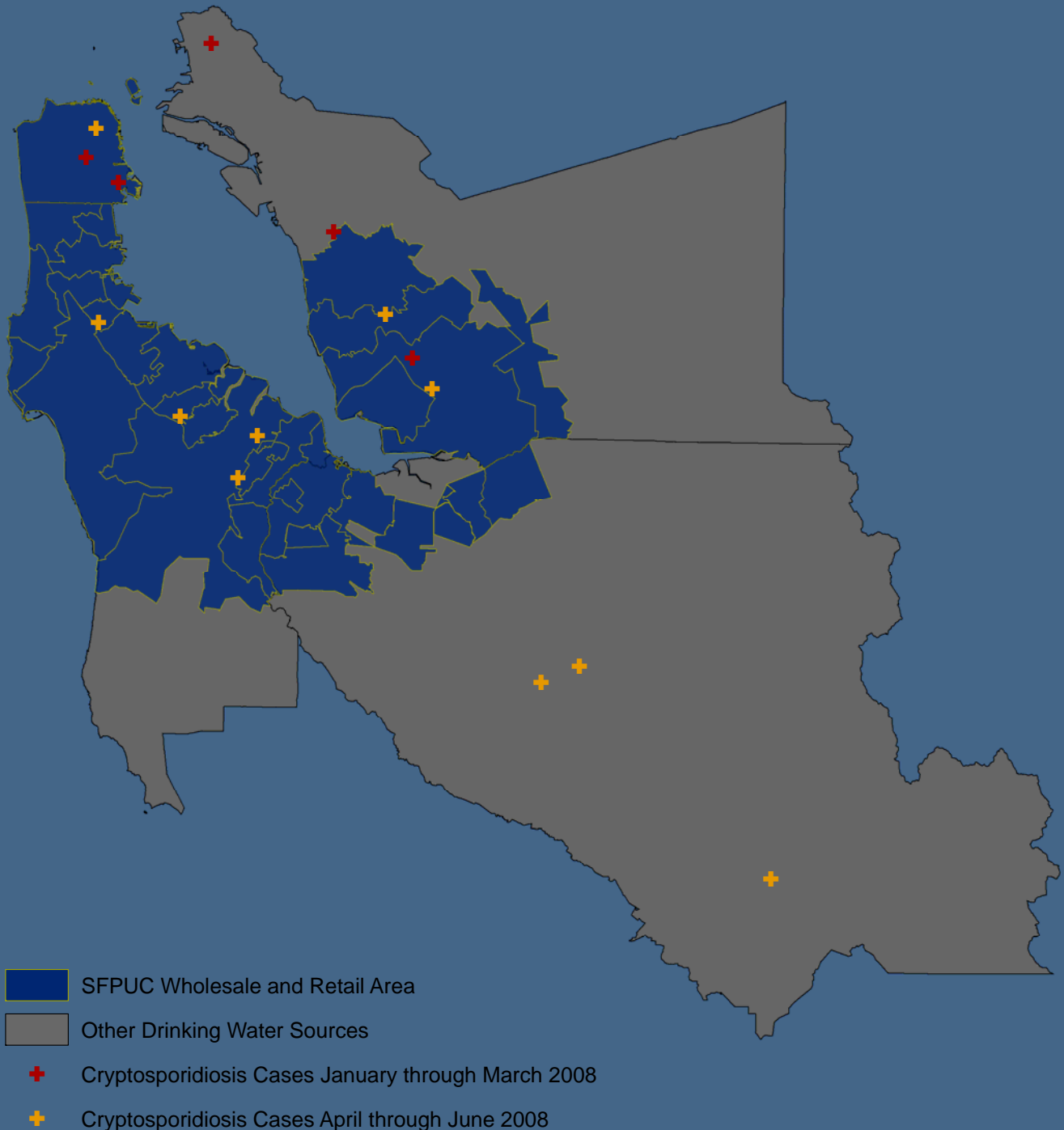
[‡] Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change – January 1, 2006 and 2007. Sacramento, California, May 2007.

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The Cryptosporidiosis Surveillance Project

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



The Cryptosporidiosis Surveillance Project area includes Alameda, San Francisco, San Mateo, Santa Clara and Tuolumne Counties. No cases were reported in Tuolumne County. Tuolumne County is not shown on the map.



Cryptosporidiosis Surveillance Project

January-September 2008



The Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in counties served in part or completely 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.

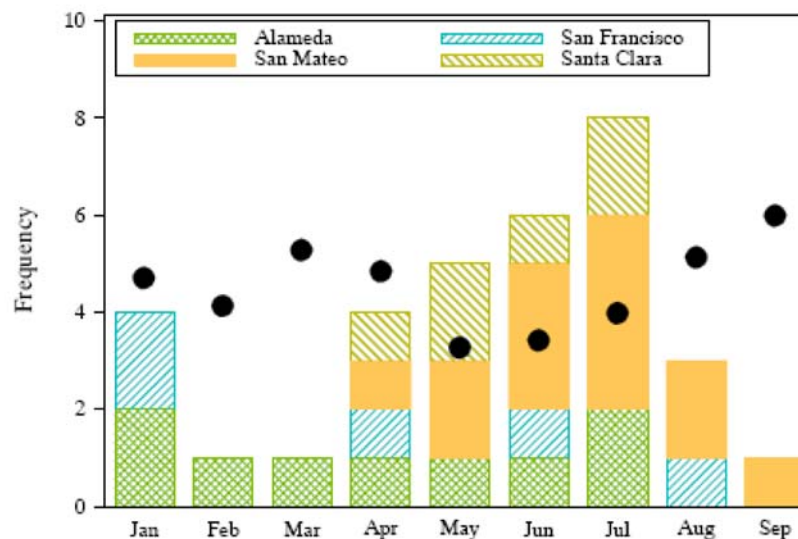
Summary: January– September 2008:

Thirty-three cryptosporidiosis cases were reported from January through September, 2008. In June and July the number of cases exceeded the respective historic monthly averages; however, no common exposures were identified. Of the 12 cases with positive specimens in July, August and September, nine resided in areas served by the San Francisco Public Utilities Commission.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January –September 2008

County	N	%		Cumulative Incidence per 100,000‡
		Male	Female	
Tuolumne	0	NA	NA	NA
San Mateo	13	46	54	1.76
Santa Clara	6	50	50	0.33
Alameda	9	67	33	0.58
San Francisco	5	100	0	0.61
Total	33	61	32	0.66

Figure 1: Cryptosporidiosis Case Counts by Month and County 2008



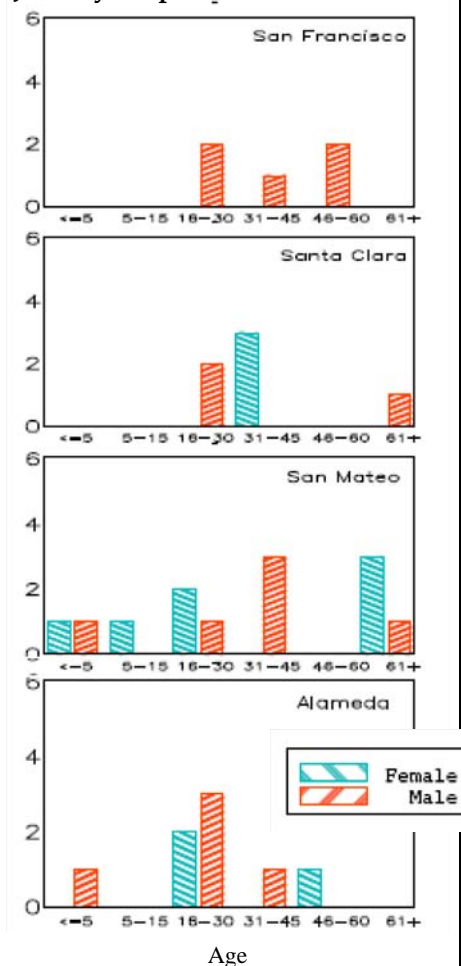
No cases reported in Tuolumne County. Points represent monthly mean case counts 2000-2005 and 2007. Data from 2006 have been omitted due to a recreational water-associated outbreak in August, September and October, 2006.*

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county.
- Figure 1: Monthly case totals by county. Historical monthly mean case totals for all counties combined are overlain on the figure.
- Figure 2: Cryptosporidiosis case counts by county, age group and sex.
- Map: Cryptosporidiosis case residence by drinking water source.

* Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.
 ‡ 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, 2006 and 2007. Sacramento, California, May 2007.

Figure 2: Case Counts by County, Age and Sex. January– September 2008



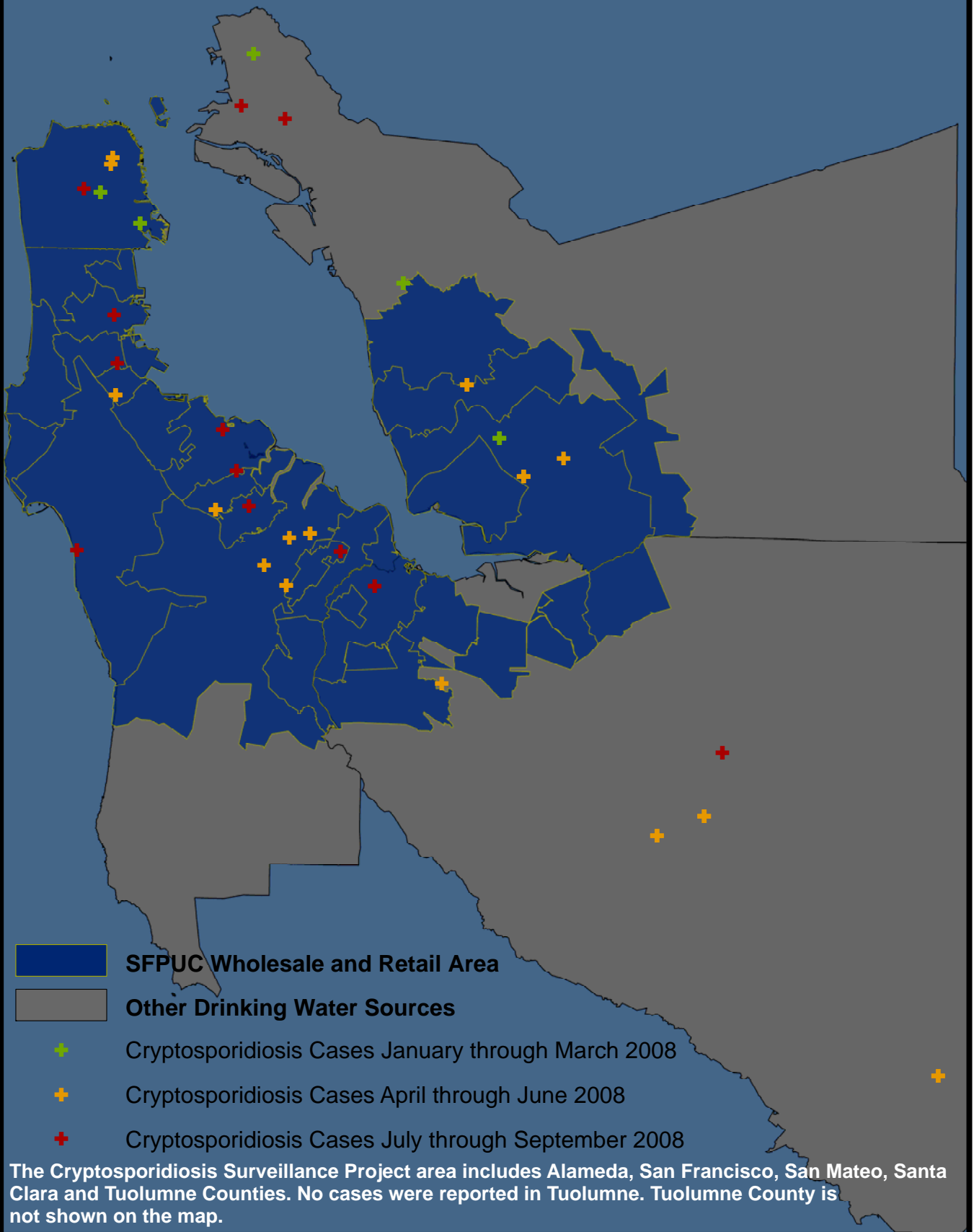
* Missing data for one Alameda County case.

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The Cryptosporidiosis Surveillance Project

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





Cryptosporidiosis Surveillance Project Annual Report 2008



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 2008: During the fourth quarter of 2008, 21 cases of cryptosporidiosis were reported in the study area. Figure 1 presents case counts by month and county.

2008 Surveillance: In 2008 a total of 56 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 16 cases or 2.16 cryptosporidiosis cases per 100,000 residents in San Mateo County (Table 1). At 1.70 cases per 100,000 residents, 2008 is the first year of surveillance that San Francisco County did not have the highest CI. Figure 2 presents case counts by county, age and gender.

Table 1: Number and Cumulative Incidence by County, 2008

County	N	Cumulative Incidence per 100,000 [‡]
Tuolumne	0	NA
San Mateo	16	2.16
Santa Clara	14	0.76
Alameda	12	0.78
San Francisco	14	1.70
Total	56	1.12

Figure 2: Case Counts by County, Age and Sex, 2008

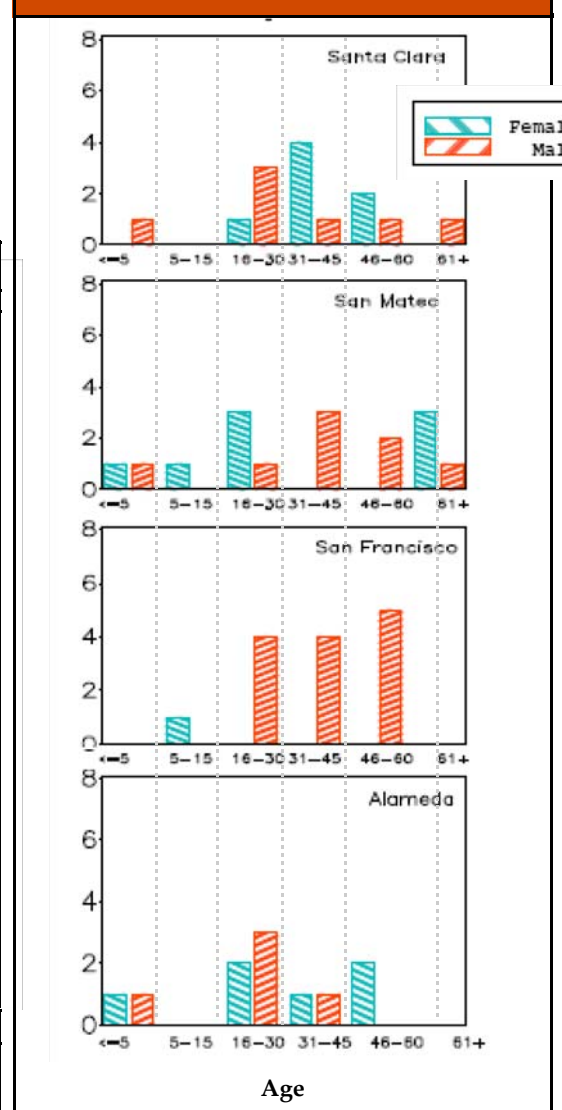
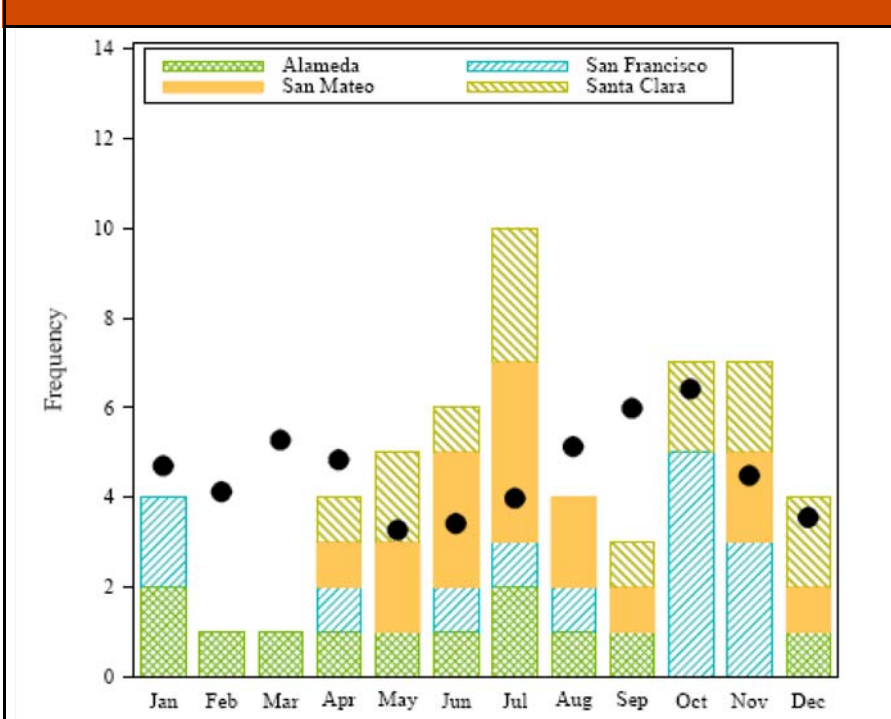


Figure 1: Cryptosporidiosis Case Counts by Month and County, 2008



No Cases Reported in Tuolumne County.
Points represent monthly mean case counts 2000-2005 and 2007. Data from 2006 have been omitted due to an outbreak in August, September, and October, 2006.

[†] Alameda and San Francisco county data and historical data obtained through the cooperation of the California Emerging Infections Program.
[‡] 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, 2006 and 2007. Sacramento, California, May 2007.

Cryptosporidiosis Case Demographics and Risk Factors

In 2008, 15(29%) of cryptosporidiosis cases were white and 34(61%) were male. Data on race/ethnicity were not collected for a 23(45%) 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 2008, none reported contact with a confirmed cryptosporidiosis case during the incubation period. Five reported contact with a suspected case. Thirteen (27%) cases over age 15 reported sexual contact during the incubation period. Of these, 11 were male; five (17%) adult male cases reported MSM activity. Fifteen (27%) cases reported a compromised immune status. While 18 (30%) cases reported contact with animals during the incubation period, only 2 had contact with farm or non-domesticated animals. Fifteen (28%) cases reported foreign travel; all of these were to a developing nation. Eighteen cases reported any recreational water exposure during the incubation period. Table 3 presents risk factors for cryptosporidiosis infection by county.

Table 2: Cryptosporidiosis Case Demographics by County		
	N	(%)by County
Alameda		
Male	6	(50%)
White	3	(27%)
Black	2	(18%)
Hispanic	1	(9%)
Other/Unknown	5	(45%)
San Francisco		
Male	13	(93%)
White	4	(29%)
Black	2	(14%)
Hispanic	3	(21%)
Other/Unknown	5	(36%)
San Mateo		
Male	8	(50%)
White	6	(40%)
Hispanic	3	(20%)
Other/Unknown	6	(40%)
Santa Clara		
Male	7	(50%)
White	2	(18%)
Hispanic	2	(18%)
Unknown Race/Ethnicity	7	(64%)

Table 3: Percentage of Cases by County with Know Risk Factors During the Incubation Period.				
Risk Factor	County	N	(%)	
Contact with Suspect Case	Alameda	1	(10%)	
	San Francisco	3	(30%)	
	San Mateo	1	(7%)	
Daycare	Alameda	2	(20%)	
	Santa Clara	3	(25%)	
Workcare	Alameda	2	(20%)	
	San Mateo	3	(23%)	
	Santa Clara	1	(8%)	
Sexual Activity*	Alameda	3	(25%)	
	San Francisco	7	(54%)	
	San Mateo	1	(11%)	
	Santa Clara	2	(15%)	
MSM**	Alameda	1	(25%)	
	San Francisco	4	(31%)	
Contact with Farm or Non-Domesticated Animals	Santa Clara	2	(14%)	
Immune Suppression	Alameda	3	(30%)	
	San Mateo	3	(23%)	
	San Francisco	7	(64%)	
	Santa Clara	2	(17%)	
Foreign Travel	Alameda	3	(25%)	
	San Francisco	1	(7%)	
	San Mateo	5	(31%)	
	Santa Clara	6	(43%)	
Recreational Water Contact ***	Alameda	2	(17%)	
	San Francisco	4	(29%)	
	San Mateo	6	(38%)	
	Santa Clara	6	(43%)	

* 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. For more information on CSP data collection and methods used to calculate timeliness please see "Timeliness of Cryptosporidiosis Reporting" online at http://dphwww.sfdph.org/phes/water/water_publications.htm.

In 2008, CSP received case notification of positive cryptosporidium laboratory results for 50% of the 56 cases within 12 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. Time-to-reporting was significantly longer in 2008 than in 2007. The two main causes of case reporting delays were identified as changes in personnel at clinical laboratories and health departments and changes in procedures at clinical laboratories. To correct for these, CSP initiated a new working relationship with a laboratory serving South Bay communities, and streamlined reporting with affected county health departments. Table 5 presents county-specific cryptosporidiosis case reporting characteristics.

CSP completed case interviews for 57% of cases in 2008. Interviews were completed within 4 days of notification for 50% of all interviewed cases.

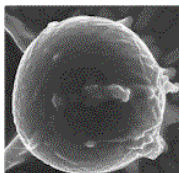


Table 4: Median Days between Specimen Collection and Report to CSP, 2008

	N	Median	Min	Max
2008	56	12	1	147
Quarter				
Quarter 1	6	39	8	51
Quarter 2	15	13	3	104
Quarter 3	18	20	1	147
Quarter 4	18	7.5	2	53
Informant				
California Emerging Infections program	6	38	6	77
Clinical Diagnostic Laboratory	18	6.5	1	29
County Health Department	22	11	1	53
California Department of Public Health	11	78	34	147
County				
Alameda	12	48	3	111
San Francisco	14	8.5	2	77
San Mateo	16	7.5	1	22
Santa Clara	14	12	2	147

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2008

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	4	38	6	46
	Clinical Diagnostic Laboratory	1	3	NA	NA
	California Department of Public Health	7	78	34	111
	Quarter 1	4	45	34	51
	Quarter 2	3	31	6	104
San Francisco	Quarter 3	4	82	60	111
	Quarter 4	1	3	3	3
	California Emerging Infections Program	1	77	NA	NA
	Clinical Diagnostic Laboratory	13	8	2	20
	Quarter 1	2	11	8	14
San Mateo	Quarter 2	2	10	7	13
	Quarter 3	2	40	4	77
	Quarter 4	8	7	2	20
	Clinical Diagnostic Laboratory	3	2	1	6
	San Mateo County Health Services Agency	13	12	1	22
Santa Clara	Quarter 1	0	NA	NA	NA
	Quarter 2	6	14	3	22
	Quarter 3	7	2	1	21
	Quarter 4	3	6	6	22
	California Emerging Infections Program	1	7	NA	NA
Santa Clara	Clinical Diagnostic Laboratory	1	29	NA	NA
	Santa Clara County Public Health Department	9	11	2	53
	California Department of Public Health	3	81	38	147
	Quarter 1	0	NA	NA	NA
	Quarter 2	4	18	4	36
Santa Clara	Quarter 3	4	46	7	147
	Quarter 4	6	12.5	2	53

This report was created in January 2009 by the San Francisco Department of Public Health Environmental Health Section in partnership with the San Francisco Public Utilities Commission. For more information, contact michelle.kirian@sfdph.org, visit the San Francisco Department of Public Health Water Epidemiology website <http://www.sfpbes.org/water>, or the Public Utilities Commission website www.sfwater.org.

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Cryptosporidiosis Surveillance Project

First Quarter Report

2009



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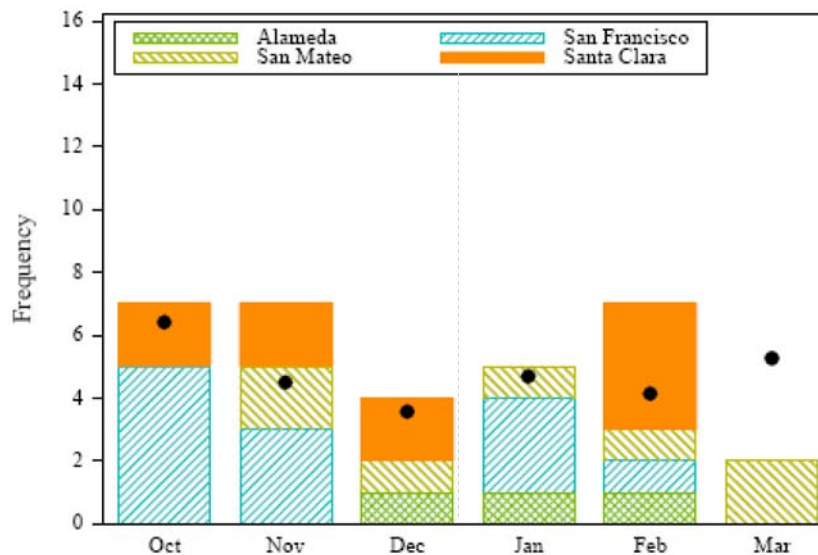
Surveillance Summary: First Quarter 2009:

During the first quarter of 2009, fourteen cases of cryptosporidiosis were reported in the study area. Of the reported cases, twelve reside in areas served by the San Francisco Public Utilities Commission. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January –March 2008

County	N	% Male	Cumulative Incidence per 100,000 [‡]
Tuolumne	0	NA	NA
San Mateo	4	0	0.54
Santa Clara	4	0	0.22
Alameda	2	50	0.13
San Francisco	4	100	0.49
Total	14	36	0.28

Figure 1: Cryptosporidiosis Case Counts by Month and County October 2008 through March 2009



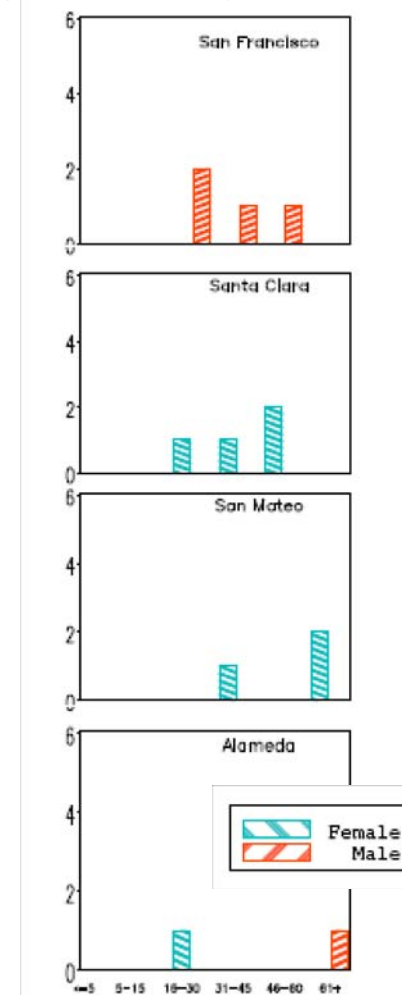
No cases reported in Tuolumne County.
 Points represent monthly mean case counts 2000-2005 and 2007. Data from 2006 have been omitted due to a recreational water-associated outbreak in August, September and October, 2006.*

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2009.
- Figure 1: Monthly case totals by county for October through December 2008 and January through March 2009.
- Figure 2: Cryptosporidiosis case counts by county, age group and sex for January through March 2009.
- Map: Cryptosporidiosis case residence by drinking water source.

*historical data obtained through the cooperation of the California Emerging Infections Program.
[‡] 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, 2007 and 2008. Sacramento, California, May 2008.

Figure 2: Case Counts by County, Age and Sex. January– March 2009



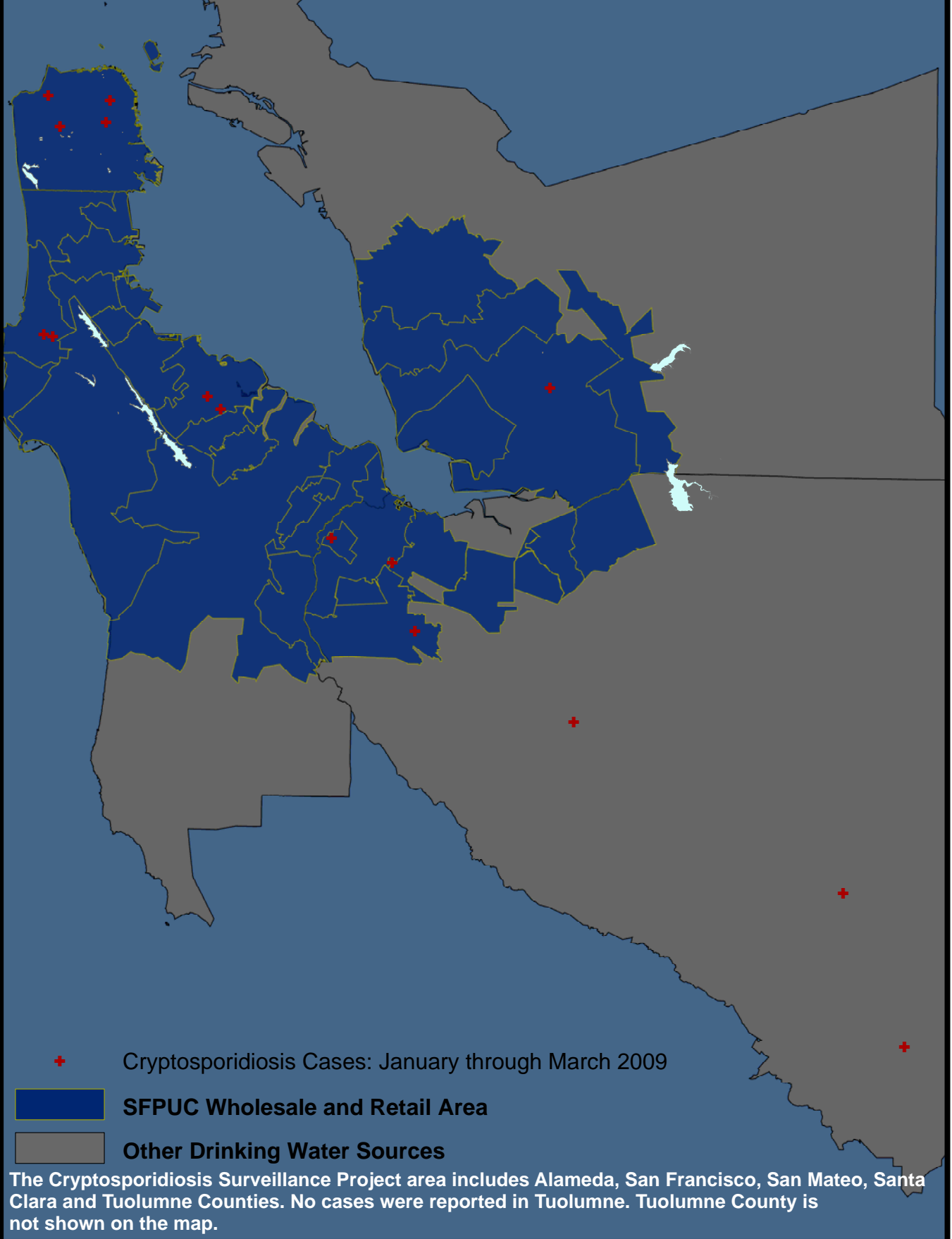
*No cases reported in Tuolumne Counties.
 * Missing data for one San Mateo County case.

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The Cryptosporidiosis Surveillance Project

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





Cryptosporidiosis Surveillance Project

Second Quarterly Report

2009



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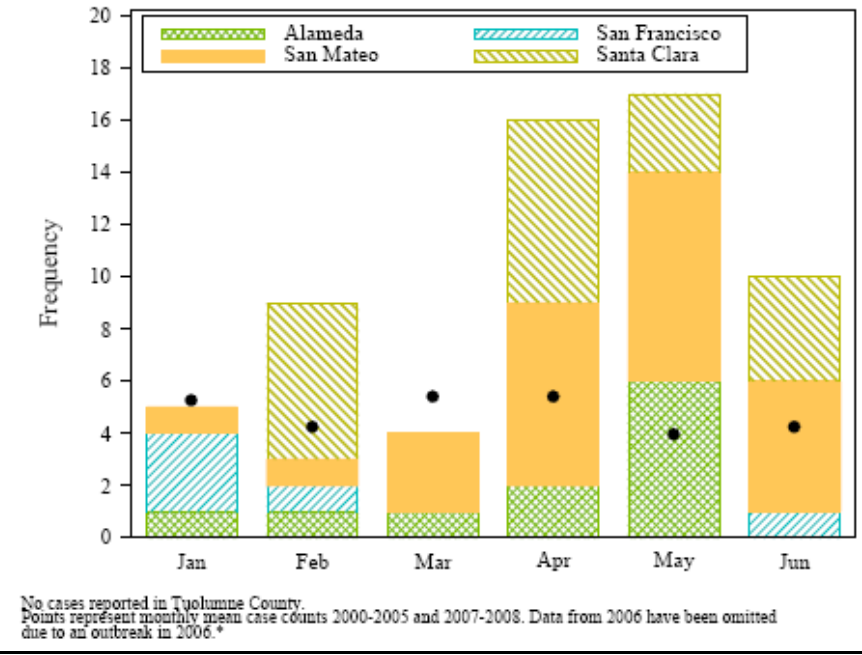
Surveillance Summary: Second Quarterly 2009:

During the second quarter of 2009, 61 cases of cryptosporidiosis were reported in the study area. Significantly more cases were reported in the second quarter of 2009 than in previous years. The probable cause of the increase was a change in testing and reporting by a major medical provider. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January –June 2009

County	N	% Male		Cumulative Incidence per 100,000 [‡]
		N	%	
Tuolumne	0	NA	NA	NA
San Mateo	25	28	3.35	
Santa Clara	20	35	1.08	
Alameda	11	27	0.71	
San Francisco	5	100	0.59	
Total	61	36	1.21	

Figure 1: Cryptosporidiosis Case Counts by Month and County 2009

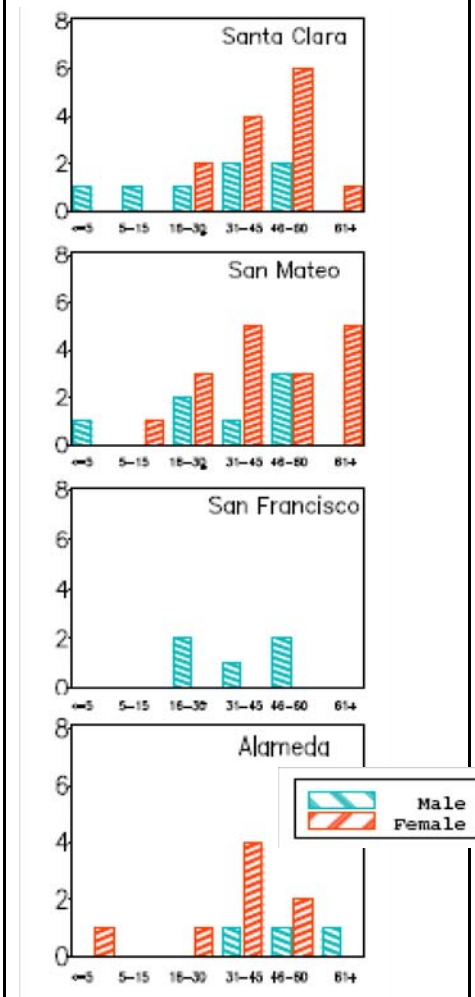


Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2009.
- Figure 1: Monthly case totals by county for January through June 2009.
- Figure 2: Cryptosporidiosis case counts by county, age group and sex for January through June 2009.
- Map: Cryptosporidiosis case residence by drinking water source.

*Historical data obtained through the cooperation of the California Emerging Infections Program.
[‡] 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, 2008 and 2009.

Figure 2: Case Counts by County, Age and Sex. January– June 2009



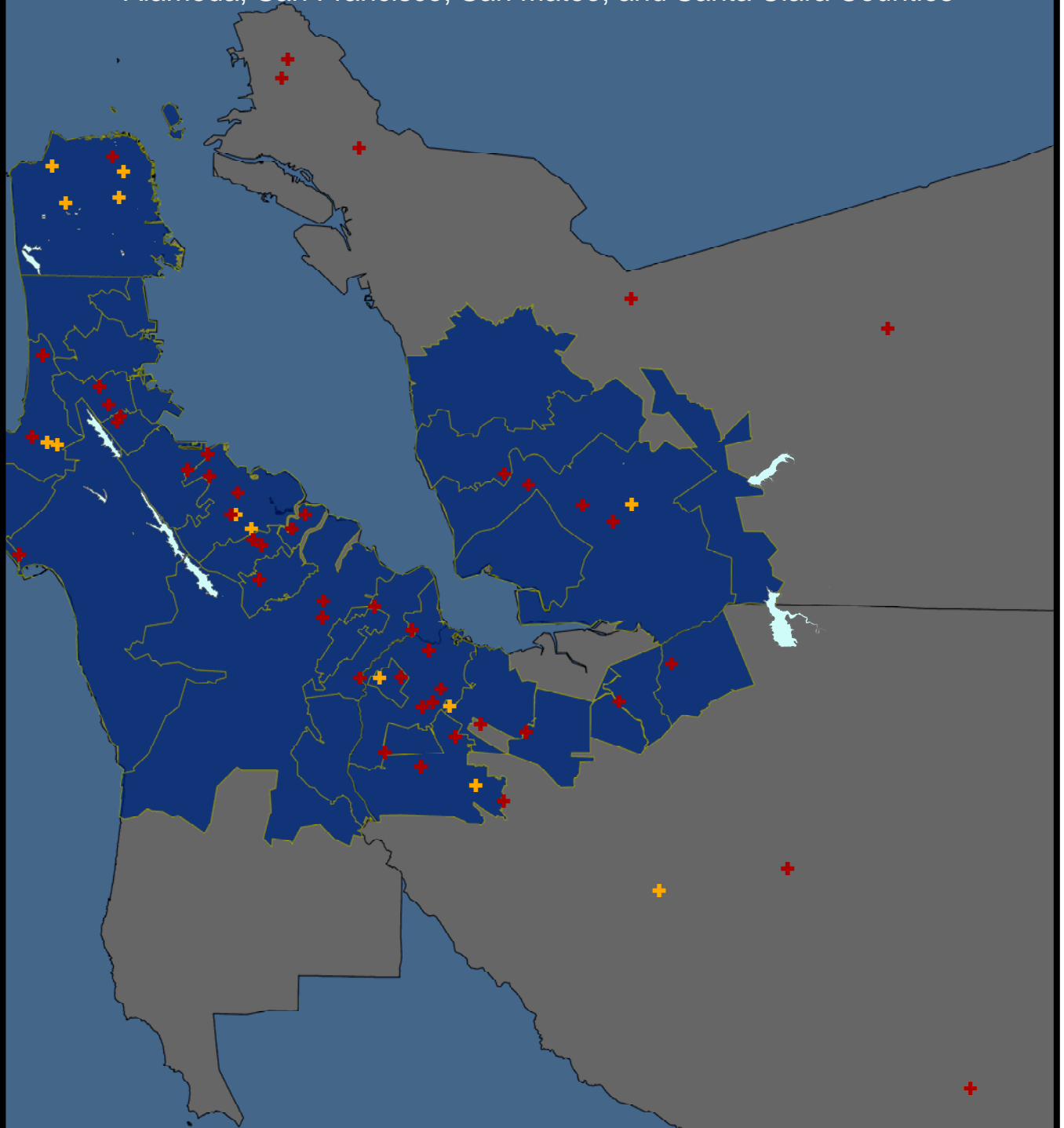
*No cases reported in Tuolumne Counties.
 * Missing data for one San Mateo County case.

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The Cryptosporidiosis Surveillance Project

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



- + Cryptosporidiosis Cases: April-June 2009
- + Cryptosporidiosis Cases: January-March 2009
- SFPUC Wholesale and Retail Area
- Other Drinking Water Sources

The Cryptosporidiosis Surveillance Project area includes Alameda, San Francisco, San Mateo, Santa Clara and Tuolumne Counties. No cases were reported in Tuolumne. Tuolumne County is not shown on the map.



Cryptosporidiosis Surveillance Project

Third Quarterly Report

2009



The San Francisco Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in Bay Area Counties served in part or completely 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: Third Quarterly 2009:

During the third quarter of 2009, 68 cryptosporidiosis cases were reported. Significantly more cases were reported in the second and third quarters of 2009 than in previous years. Potential reasons for an artificial increase in cases are being investigated. However, no common risk factors have been identified and at this time we do not believe this increase to represent a true outbreak.

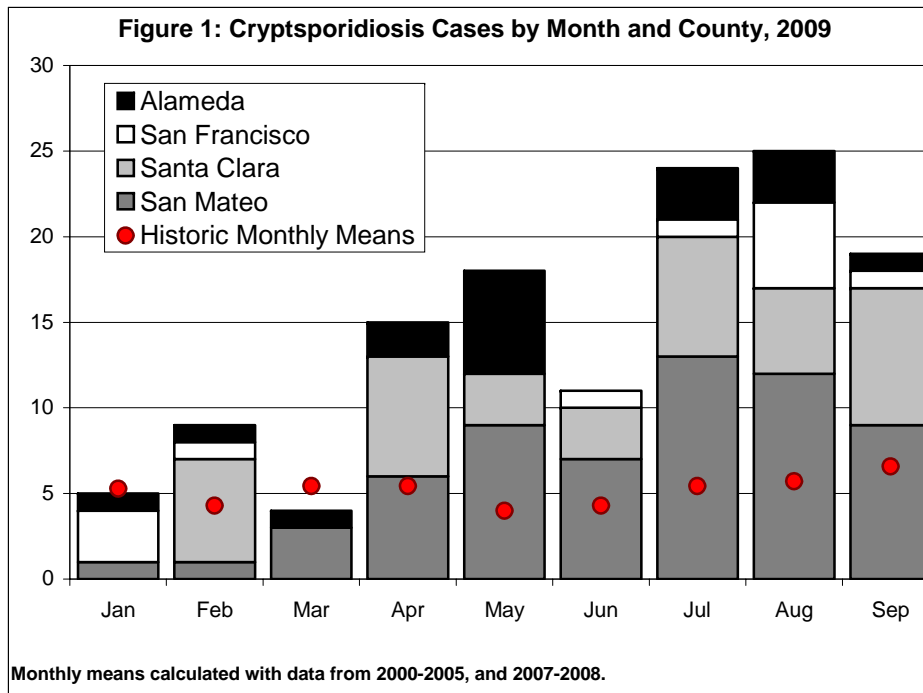


Figure 2: Case Counts by County, Age and Sex.



Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January –September 2009

County	N	%		Cumulative Incidence per 100,000 [‡]
		Male	Female	
Tuolumne	0	NA	NA	NA
San Mateo	61	34	66	8.18
Santa Clara	39	31	69	2.10
Alameda	18	33	67	1.16
San Francisco	12	83	17	1.42
Total	130	38	62	2.57

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2009.
- Figure 1: Monthly case totals by county for January through September 2009.
- Figure 2: Cryptosporidiosis case counts by county, age group and sex for January through September 2009.

[†] Historical data obtained through the cooperation of the California Emerging Infections Program.
[‡] 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, 2008 and 2009. Sacramento, California, May 2009.

*No cases reported in Tuolumne County.
 * Missing data for two San Mateo County cases.

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Cryptosporidiosis Surveillance Project Annual Report 2009



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Surveillance Summary. Fourth Quarter 2009.

During the fourth quarter of 2009, 38 cases of cryptosporidiosis were reported in the study area. Significantly more cases were reported in the fourth quarter than in the same period in previous years. Figure 1 presents case counts by month and county.

2009 Surveillance.

In 2009 a total of 165 cases were reported. An unusual increase in case reports were received in April through December. Potential reasons for an artificial increase in cases are being investigated. The majority of positive cryptosporidiosis case reports originated from two non-independent laboratories (Figure 2). No common risk factors have been identified and at this time we do not believe this increase to represent a true outbreak.

Compared to 2008, the incidence of cryptosporidiosis increased for all counties. The largest increase was seen in Santa Clara and San Mateo Counties. Table 1 lists case counts and cumulative incidence by county.

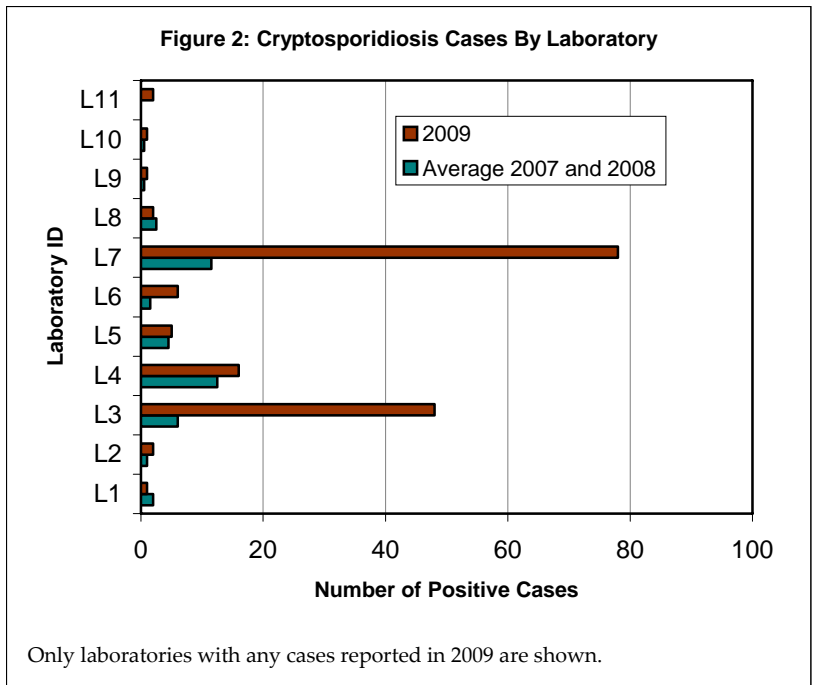
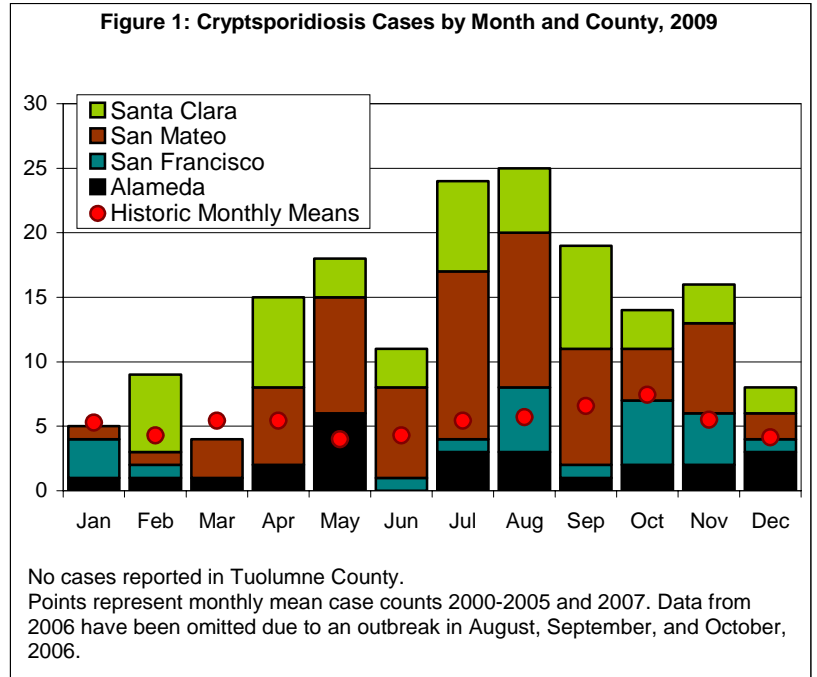


Table 1: Number of Cases and Cumulative Incidence of Cryptosporidiosis by County, 2009

County	N	Cumulative Incidence per 100,000 [‡]
Tuolumne	0	NA
San Mateo	74	9.92
Santa Clara	47	2.53
Alameda	22	1.41
San Francisco	22	2.60
Total	165	3.26

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

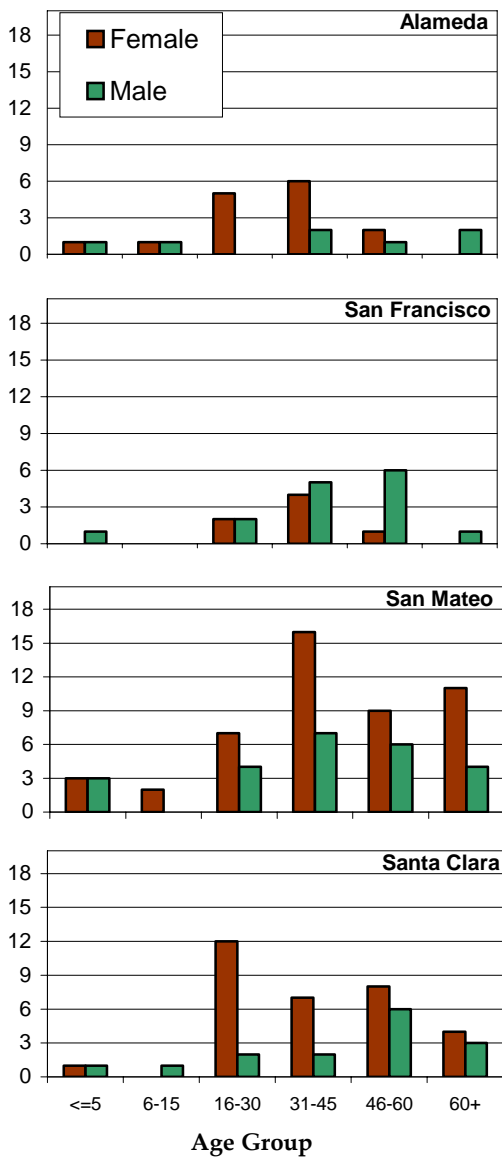
[‡] Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2008 and 2009. Sacramento, California, May 2009.

Cryptosporidiosis Case Demographics and Risk Factors

In 2009, 62 (38%) of cryptosporidiosis cases were male. Figure 2 presents case counts by county, age and gender. 2009 is the first year since surveillance began in which more cases were reported among women than men.

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 2009, 10 (6%) reported contact with a suspected case during the incubation period. Twenty-six (16%) cases over age 15 reported sexual contact during the incubation period; one adult male case reported MSM activity. 12 (7%) cases reported compromised immune status. Fifty-six (34%) cases reported contact with animals during the incubation period; 13 (8%) had contact with farm or non-domesticated animals. 27 (17%) cases reported foreign travel. Forty-seven (28%) cases reported any recreational water exposure. In San Francisco, 10 (46%) cases reported recreational water exposure, however; four of these did not swim at a location in California. Table 3 presents selected risk factors for cryptosporidiosis infection by county.

Figure 2: Case Counts by County, Age and Sex, 2009



No cases reported in Tuolumne County.
Missing data for two San Mateo County cases.

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2009

Risk Factor	County	N	(%)
Contact with Suspect Case	Alameda	1	(6%)
	San Francisco	1	(6%)
	San Mateo	7	(13%)
	Santa Clara	1	(3%)
Daycare	Alameda	3	(18%)
	San Francisco	1	(6%)
	San Mateo	10	(18%)
	Santa Clara	7	(23%)
Workcare	Alameda	2	(12%)
	San Mateo	5	(9%)
	Santa Clara	2	(7%)
Sexual Activity*	Alameda	3	(17)
	San Francisco	5	(24%)
	San Mateo	12	(19%)
	Santa Clara	6	(14%)
MSM**	San Francisco	1	(7%)
Contact with Farm or Non-Domesticated Animals	Alameda	1	(5%)
	San Francisco	3	(14%)
	San Mateo	5	(7%)
	Santa Clara	4	(9%)
Immune Suppression	Alameda	2	(12%)
	San Francisco	4	(22%)
	San Mateo	4	(7%)
	Santa Clara	2	(7%)
Foreign Travel	Alameda	3	(14%)
	San Francisco	6	(27%)
	San Mateo	9	(12%)
	Santa Clara	9	(19%)
Recreational Water Contact ***	Alameda	4	(18%)
	San Francisco	10	(46%)
	San Mateo	21	(28%)
	Santa Clara	12	(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. For more information on CSP data collection and methods used to calculate timeliness please see "Timeliness of Cryptosporidiosis Notification" online at http://www.sfpbes.org/water/crypto/Crypto_Timeliness_07.pdf

In 2009, CSP received case notification of positive cryptosporidium laboratory results for 50% of the 165 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 78% of cases in 2009. Interviews were completed within one day of notification for 50% of all interviewed cases.

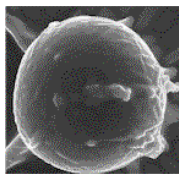


Table 4: Median Days between Specimen Collection and Report to CSP, 2009

	N	Median	Min	Max
2009	165	7	1	132
Quarter				
Quarter 1	18	16	1	132
Quarter 2	44	11	1	43
Quarter 3	68	6	1	43
Quarter 4	35	5	1	40
Informant				
California Emerging Infections program	6	10	6	132
Clinical Diagnostic Laboratory	94	7	1	43
County Health Department	65	6	1	54
County				
Alameda	22	22	6	104
San Francisco	22	4	1	43
San Mateo	74	5	1	42
Santa Clara	47	10	1	132

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2009

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	5	9	6	104
	Clinical Diagnostic Laboratory	17	27	7	43
	Quarter 1	3	19	7	104
	Quarter 2	8	28	6	43
	Quarter 3	7	10	7	39
San Francisco	Quarter 4	4	11	7	24
	Clinical Diagnostic Laboratory	8	8	1	43
	San Francisco Communicable Disease Control	14	4	1	40
	Quarter 1	4	8	1	14
	Quarter 2	1	2	2	2
San Mateo	Quarter 3	7	7	2	43
	Quarter 4	10	4	1	40
	Clinical Diagnostic Laboratory	53	5	1	42
	San Mateo County Health Services Agency	17	6	1	22
	Other Health Department	4	6	2	17
Santa Clara	Quarter 1	5	6	3	18
	Quarter 2	22	5	1	42
	Quarter 3	34	5	1	32
	Quarter 4	13	5	2	9
	California Emerging Infections Program	1	132	132	132
Santa Clara	Clinical Diagnostic Laboratory	16	18	1	39
	Santa Clara County Public Health Department	30	6	2	54
	Quarter 1	6	26	17	132
	Quarter 2	13	17	1	39
	Quarter 3	20	6	2	39
Quarter 4	8	6	5	12	

This report was created in January 2010 by the San Francisco Department of Public Health Environmental Health Section in partnership with the San Francisco Public Utilities Commission. For more information, contact michelle.kirian@sfdph.org, visit the San Francisco Department of Public Health Water Epidemiology website <http://www.sfpbes.org/water>, or the Public Utilities Commission website www.sfwater.org.

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Cryptosporidiosis Surveillance Project

First Quarterly Report

2010



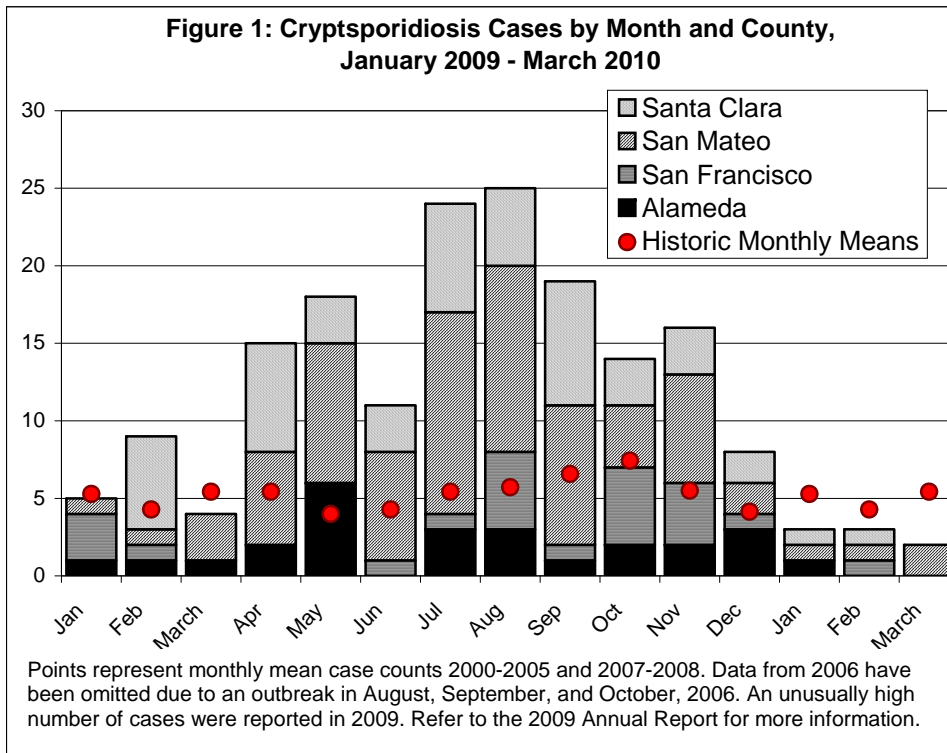
The San Francisco Bay Area Cryptosporidiosis Surveillance Project monitors human cryptosporidiosis in Bay Area Counties served in part or completely by the San Francisco Public Utilities Commission: Alameda, San Francisco, San Mateo, and Santa Clara, and Tuolumne County, where the Hetch Hetchy Reservoir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

Surveillance Summary: First Quarter 2010:

During the first quarter of 2010, eight cryptosporidiosis cases were reported. Fewer cases were reported than in the same period in 2009 or the historic average. No common exposures were identified among cases. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January –March 2010

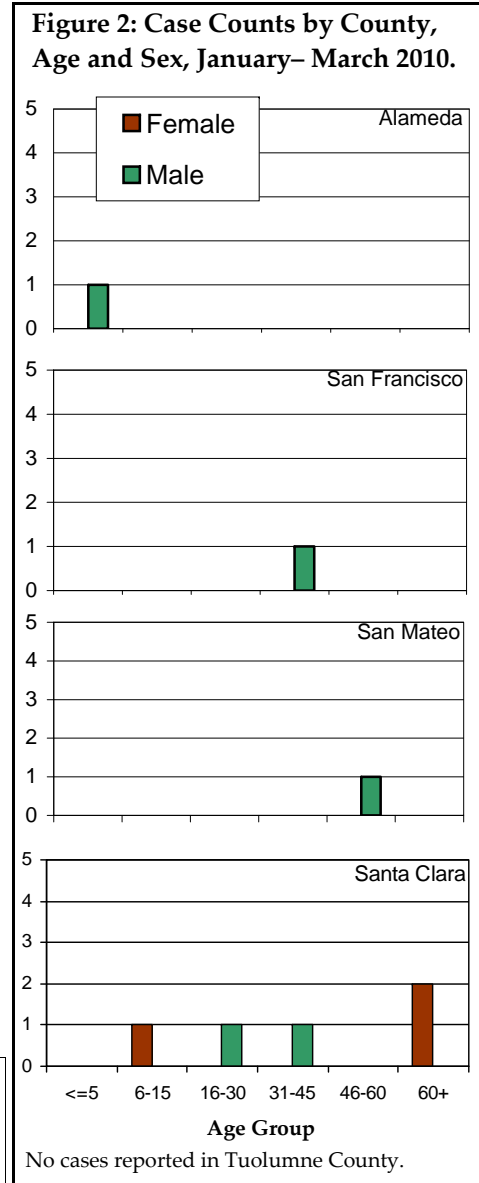
County	N	% Male		Cumulative Incidence per 100,000 [‡]
		N	%	
Tuolumne	0	NA	NA	NA
San Mateo	4	25	0.54	
Santa Clara	2	100	0.11	
Alameda	1	100	0.06	
San Francisco	1	100	0.12	
Total	8	63	0.16	



Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2010.
- Figure 1: Monthly case totals by county for January 2009 through March 2010.
- Figure 2: Cryptosporidiosis case counts by county, age group and sex for January through March 2010.

[†] Historical data obtained through the cooperation of the California Emerging Infections Program.
[‡] 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, 2008 and 2009. Sacramento, California, May 2009.



This report was created in April 2010 by the San Francisco Department of Public Health Environmental Health Section in partnership with the San Francisco Public Utilities Commission. For more information, contact michelle.kirian@sfdph.org, visit our website <http://www.sfphes.org/water/crypto>

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Cryptosporidiosis Surveillance Project

Second Quarterly Report

2010



The San Francisco Bay Area

Cryptosporidiosis Surveillance Project 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, and Tuolumne County, where the Hetch Hetchy Reservoir is located.

Surveillance Summary: Second Quarter 2010:

During the first and second quarter of 2010, 28 cryptosporidiosis cases were reported. Fewer cases were reported than in the same period in 2009. No common exposures were identified among cases. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected.

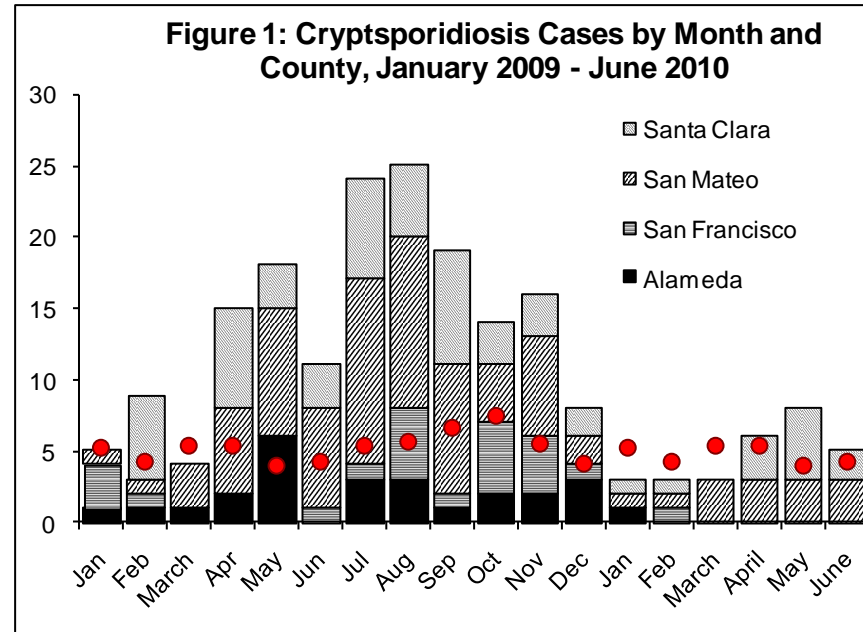
Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January – June 2010

County	N	% Male	Cumulative Incidence per 100,000 [‡]
Alameda	1	100	0.06
San Francisco	1	100	0.12
Santa Clara	12	50	0.64
San Mateo	14	36	1.86
Tuolumne	0	NA	NA
Total	28	46	0.55

[‡] 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, 2009 and 2010. Sacramento, California, May 2010.

Graphics and Tables:

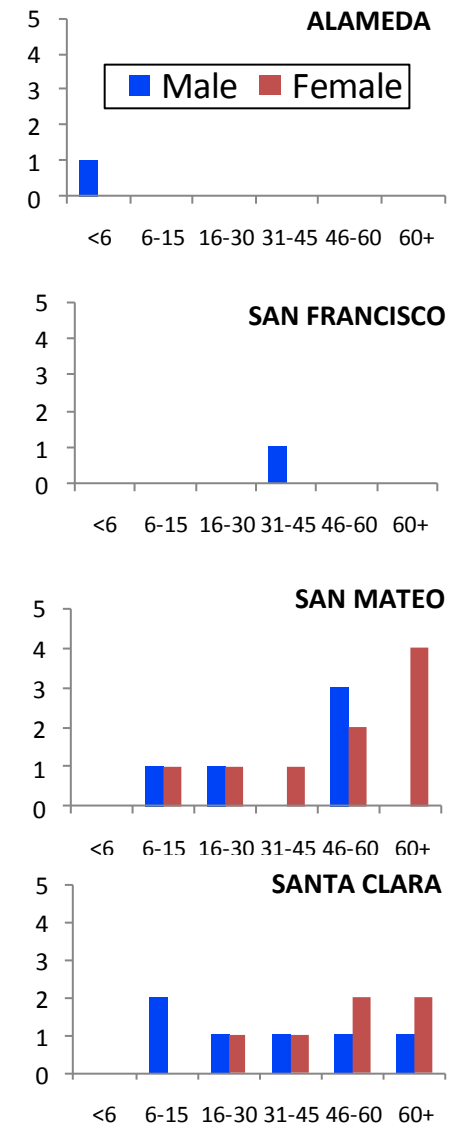
- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2010.
- Figure 1: Monthly case totals by county for January 2009 through June 2010.
- Figure 2: Cryptosporidiosis case counts by county, age group and sex for April through June 2010.



Points represent monthly mean case counts 2000-2005 and 2007-2008. Data from 2006 have been omitted due to an outbreak in August, September, and October, 2006. An unusually high number of cases were reported in 2009. Refer to the 2009 Annual Report for more information.

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

Figure 2: Case Counts by County, Age and Sex, January– June 2010



This report was created in July 2010 by the San Francisco Department of Public Health Environmental Health Section in partnership with the San Francisco Public Utilities Commission.

For more information, contact sally.stephens@sfdph.org or visit our website at <http://www.sfdph.org/water/crypto>

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Cryptosporidiosis Surveillance Project Annual Report 2010



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 2010: During the fourth quarter of 2010, 18 cases of cryptosporidiosis were reported in the project area. Fewer cases were reported in the fourth quarter than in the same period in previous year. Figure 1 presents case counts by month and county.

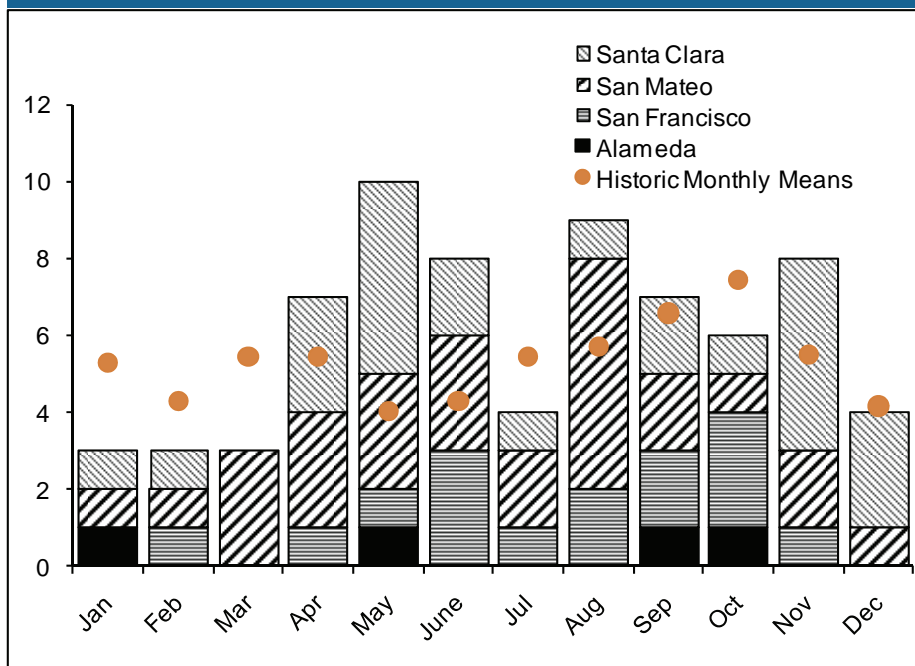
2010 Surveillance: In 2010 a total of 72 cases were reported. No system-wide, drinking water associated or other cryptosporidiosis outbreaks were detected. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to 29 cases or 3.84 cryptosporidiosis cases per 100,000 residents in San Mateo County (Table 1). Compared to 2009, the incidence of cryptosporidiosis decreased for all 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, 2010

County	N	Cumulative Incidence per 100,000 [‡]
Alameda	4	0.25
San Francisco	15	1.75
San Mateo	28	3.71
Santa Clara	25	1.33
Tuolumne	0	NA
Total	72	1.39

[‡] 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, 2009 and 2010. Sacramento, California, May 2010.

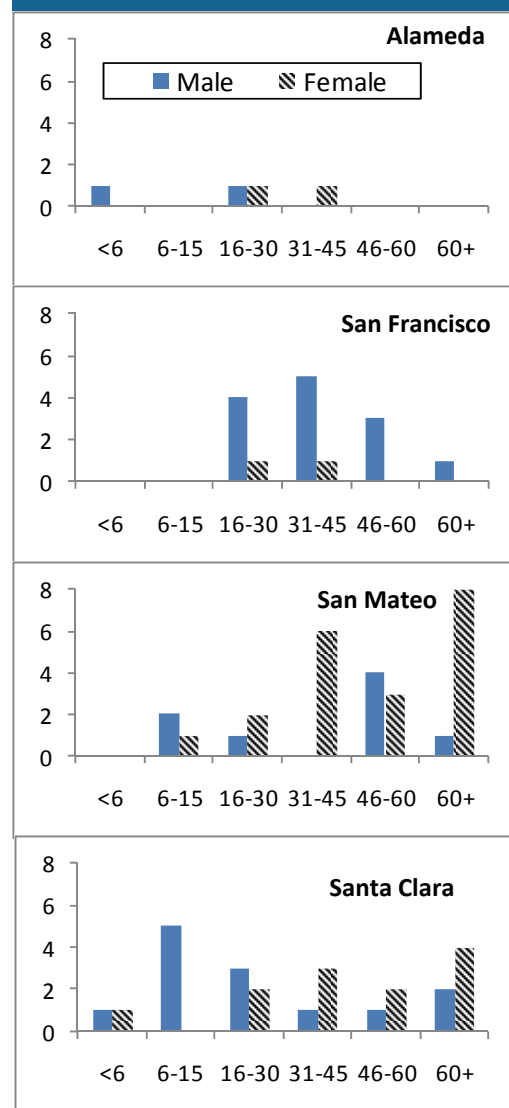
Figure 1: Cryptosporidiosis Cases by Month and County, January 2010 - December 2010



No cases reported in Tuolumne County. Points represent monthly mean case counts 2000-2005 and 2007-2008. Data from 2006 have been omitted due to an outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from presumed laboratory errors.

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

Figure 2: Case Counts by County, Age and Sex, January–December 2010



Cryptosporidiosis Case Demographics and Risk Factors

In 2010, 11 (15%) of cryptosporidiosis cases were white and 36 (50%) were male. Data on race/ethnicity were not collected for 51 (71%) 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 2010, 8 (11%) reported contact with a suspected case during the incubation period. Eleven (18%) cases over age 15 reported sexual contact during the incubation period; six adult male cases reported MSM activity. Nine (13%) cases reported compromised immune status. Twenty-six (36%) cases reported contact with animals during the incubation period; five (7%) had contact with farm or non-domesticated animals. Thirteen (18%) cases reported foreign travel. Nineteen (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, 2010

	N	(%) by County
Alameda		
Male	2	(50%)
Asian	1	(25%)
Black	1	(25%)
Other/Unknown	2	(50%)
San Francisco		
Male	13	(87%)
Black	1	(7%)
White	8	(53%)
Other/Unknown	6	(40%)
San Mateo		
Male	8	(28%)
Asian	1	(4%)
Hispanic	2	(7%)
White	2	(7%)
Other/Unknown	23	(82%)
Santa Clara		
Male	13	(52.0%)
Asian	1	(4%)
Black	1	(4%)
Hispanic	2	(8%)
White	1	(4%)
Unknown Race/Ethnicity	20	(80%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2010

Risk Factor	County	N	(%)
Contact with Suspect Case	Alameda	1	(25%)
	San Francisco	2	(13%)
	San Mateo	3	(11%)
	Santa Clara	2	(8%)
Daycare	Alameda	1	(25%)
	San Mateo	2	(7%)
	Santa Clara	3	(12%)
Workcare	Santa Clara	2	(8%)
Sexual Activity*	Alameda	1	(33%)
	San Francisco	5	(33%)
	San Mateo	2	(8%)
	Santa Clara	3	(17%)
MSM**	San Francisco	5	(38%)
	Santa Clara	1	(14%)
Contact with Farm or Non-Domesticated Animals	San Francisco	2	(13%)
	San Mateo	2	(7%)
	Santa Clara	1	(4%)
Immune Suppression	Alameda	1	(25%)
	San Francisco	4	(27%)
	San Mateo	3	(11%)
	Santa Clara	1	(4%)
Foreign Travel	Alameda	1	(25%)
	San Francisco	1	(7%)
	San Mateo	8	(29%)
	Santa Clara	3	(12%)
Recreational Water Contact ***	Alameda	1	(25%)
	San Francisco	4	(27%)
	San Mateo	9	(32%)
	Santa Clara	5	(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. For more information on CSP data collection and methods used to calculate timeliness please see "Timeliness of Cryptosporidiosis Notification" online at http://www.sfpbes.org/water/crypto/Crypto_Timeliness_07.pdf

In 2010, CSP received case notification of positive cryptosporidium laboratory results for 74% of the 72 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 78% of cases in 2010. Interviews were completed within one business day of notification for 63% of all interviewed cases.

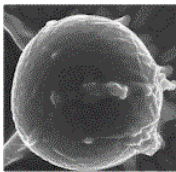


Table 4: Median Days between Specimen Collection and Report to CSP, 2010

	N	Median	Min	Max
2010	72	5	1	173
Quarter				
Quarter 1	9	7	3	13
Quarter 2	25	5	1	173
Quarter 3	20	6	2	23
Quarter 4	18	5	3	91
Informant				
California Emerging Infections program	4	59	3	132
Clinical Diagnostic Laboratory	34	5	1	10
County Health Department	34	5	2	173
County				
Alameda	4	6	3	132
San Francisco	15	14	2	173
San Mateo	29	5	1	10
Santa Clara	24	5	3	23

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2010

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	3	34	3	132
	Clinical Diagnostic Laboratory	1	7	7	7
	Quarter 1	1	7	7	7
	Quarter 2	1	132	132	132
	Quarter 3	1	4	4	4
San Francisco	California Emerging Infections Program	1	84	84	84
	San Francisco Communicable Disease Control	14	14	4	173
	Quarter 1	1	13	13	13
	Quarter 2	5	120	106	173
	Quarter 3	5	9	2	19
San Mateo	Clinical Diagnostic Laboratory	24	5	1	10
	San Mateo County Health Services Agency	4	4	3	7
	Quarter 1	5	7	3	9
	Quarter 2	9	3	1	7
	Quarter 3	10	6	3	10
Santa Clara	Clinical Diagnostic Laboratory	8	6	3	6
	Santa Clara County Public Health Department	17	4	2	23
	Quarter 1	2	6	5	6
	Quarter 2	10	4	3	7
	Quarter 3	4	4	4	23
	Quarter 4	9	5	3	11

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For more information, contact sally.stephens@sfdph.org or visit our website at <http://www.sfpbes.org/water/crypto>

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Surveillance Summary: First Quarter 2011:

During the first quarter of 2011, 19 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2010. 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 2011

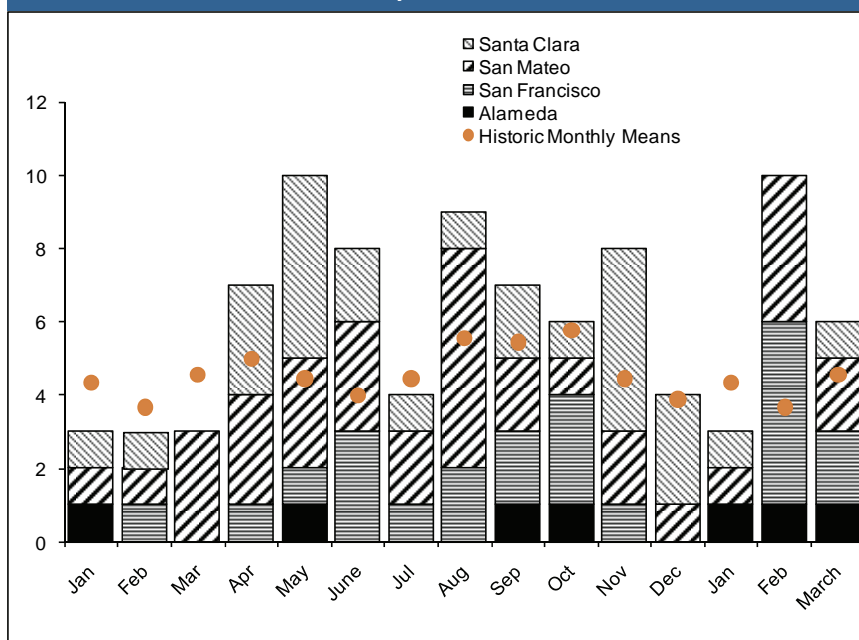
County	N	Cumulative Incidence per 100,000 [‡]	
		% Male	%
Alameda	3	67%	0.19
San Francisco	7	86%	0.82
San Mateo	7	57%	0.93
Santa Clara	2	0%	0.11
Tuolumne	0	NA	NA
Total	19	63%	0.37

[‡] 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, 2009 and 2010. Sacramento, California, May 2010.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2011.
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- Figure 2: Cryptosporidiosis case counts by county, age group and sex for January through March 2011.

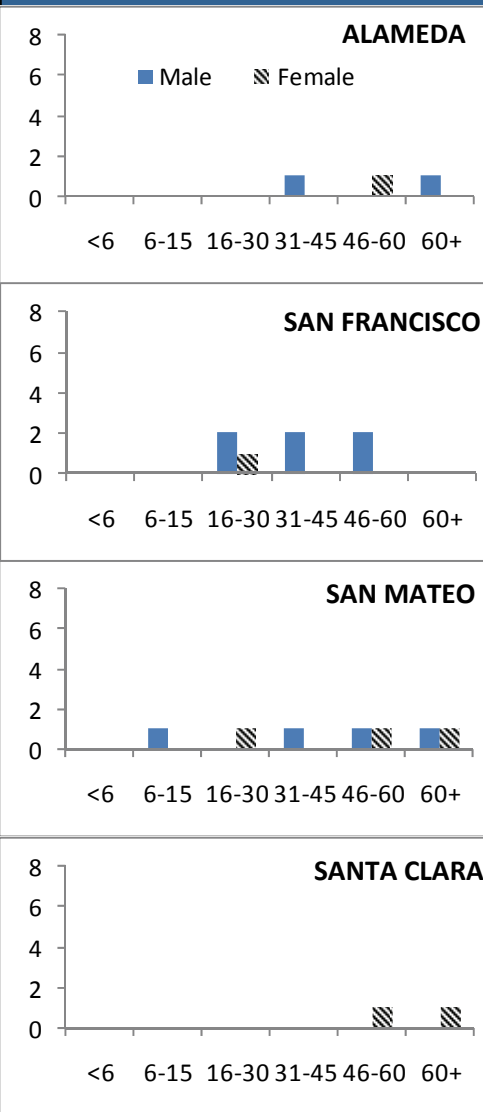
Figure 1: Cryptosporidiosis Cases by Month and County, January—March 2011



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.

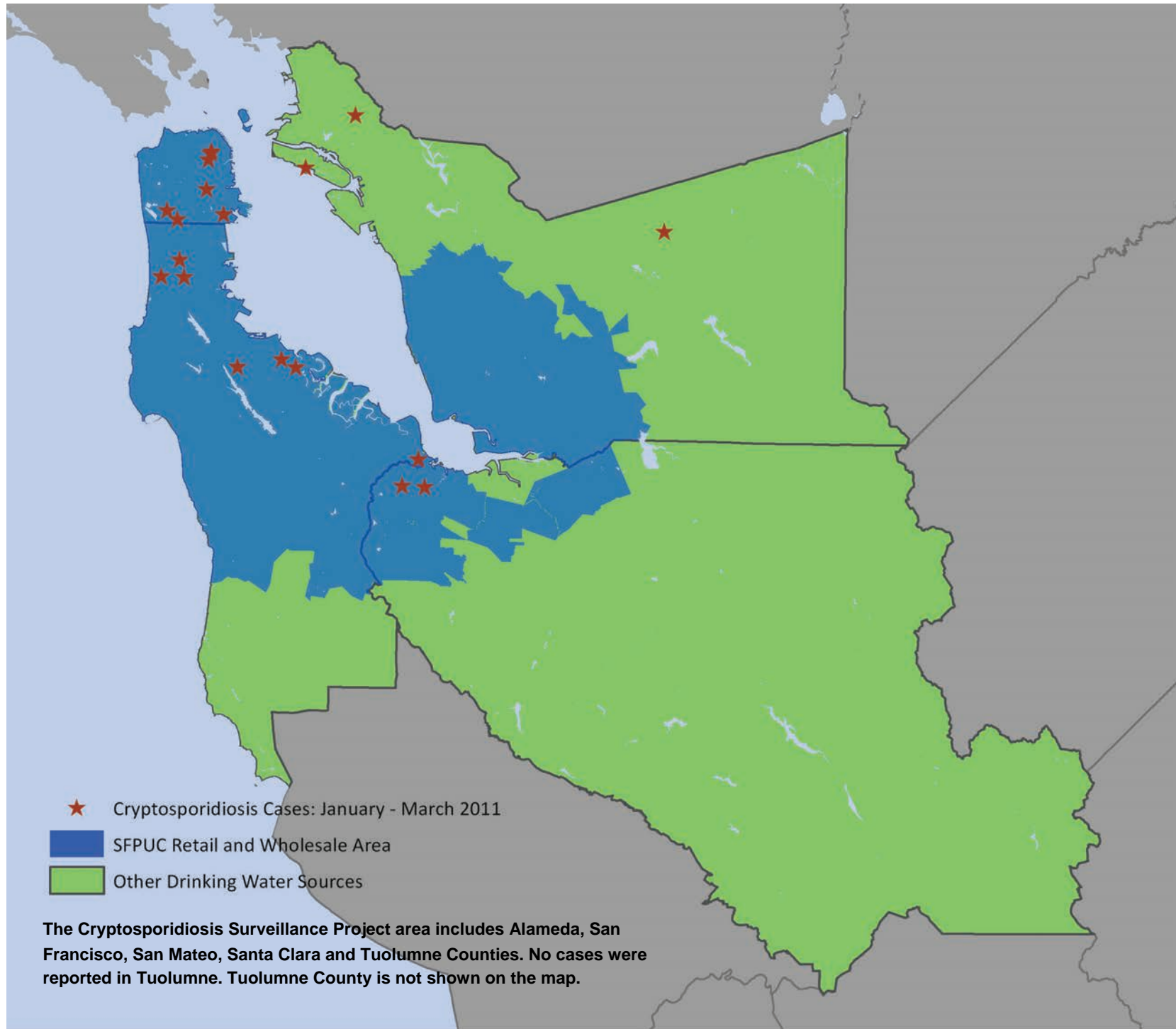
[†] Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2011



The Bay Area Cryptosporidiosis Surveillance Project

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



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 2011:

During the first and second quarter of 2011, 38 cryptosporidiosis cases were reported. A slightly higher number of cases were reported than in the same period in 2010. 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 2011

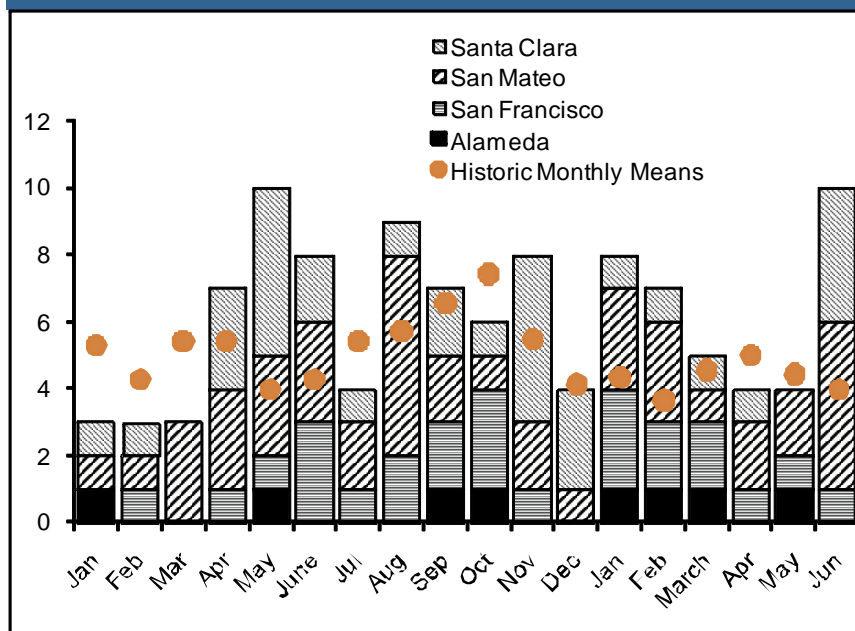
County	N	% Male	Cumulative Incidence per 100,000 [‡]
Alameda	4	50%	0.26
San Francisco	10	90%	1.23
San Mateo	16	44%	2.21
Santa Clara	8	38%	0.45
Tuolumne	0	NA	NA
Total	38	55%	0.74

[‡] 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, 2010 and 2011. Sacramento, California, May 2011.

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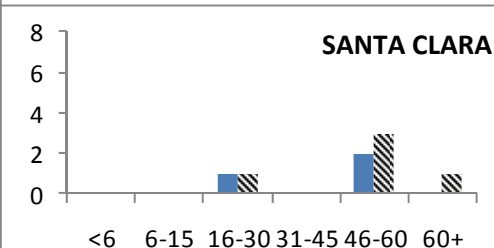
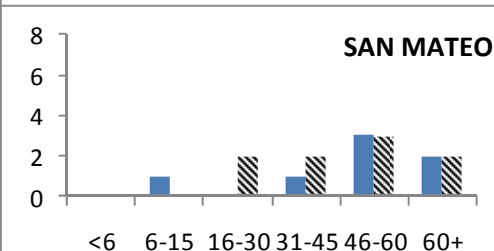
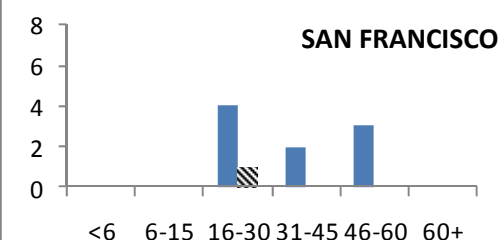
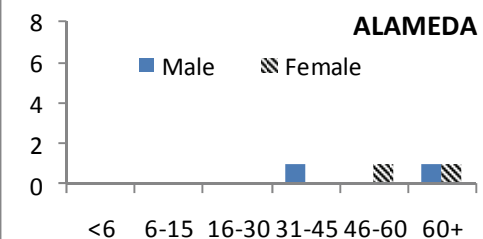
Figure 1: Cryptosporidiosis Cases by Month and County, January—June 2011



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.

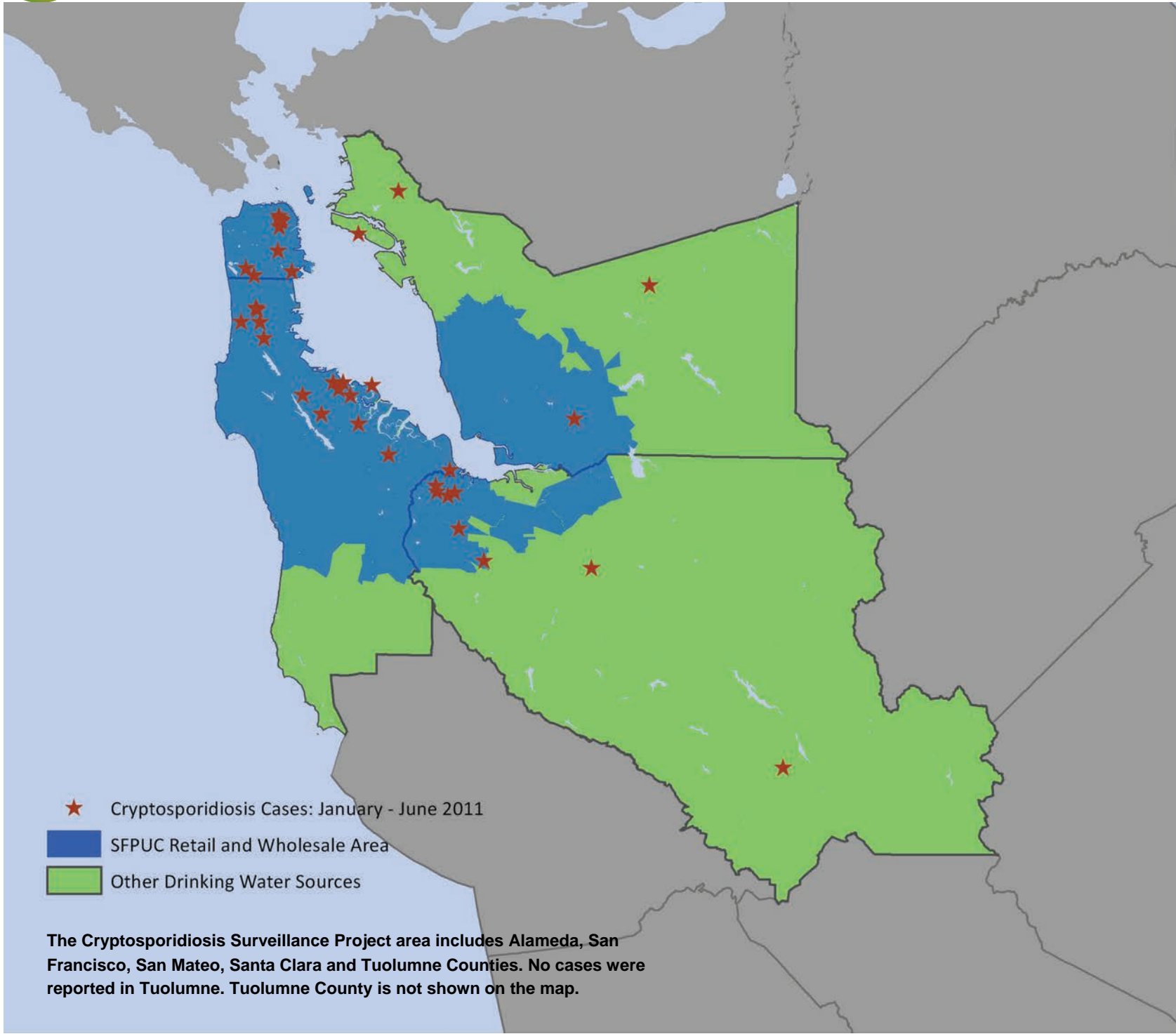
[†] Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– June 2011



The Bay Area Cryptosporidiosis Surveillance Project

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



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 2011:

During the first, second, and third quarters of 2011, 87 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2010. 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 2011

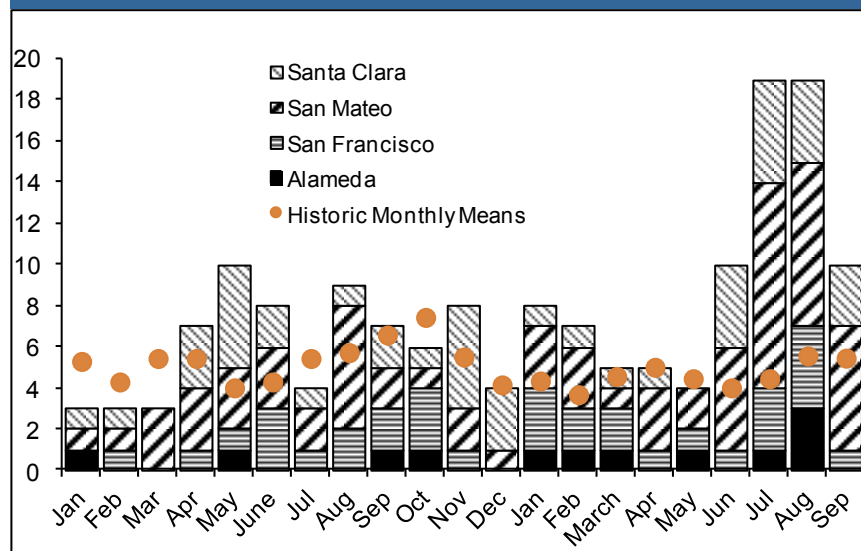
County	N	% Male	Cumulative Incidence per 100,000 [‡]
Alameda	8	63%	0.53
San Francisco	19	84%	2.34
San Mateo	41	37%	5.66
Santa Clara	19	42%	1.06
Tuolumne	0	NA	NA
Total	87	51%	1.68

[‡] 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 Percent Change — January 1, 2010 and 2011. Sacramento, California, May 2011.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2011.
- Figure 1: Monthly case totals by county for January 2010 through September 2011.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through September 2011.

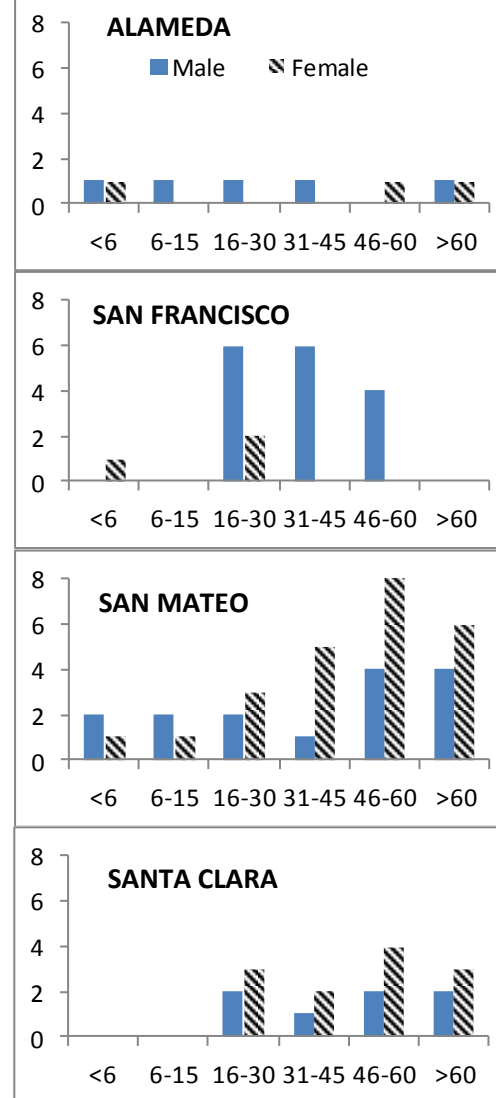
Figure 1: Cryptosporidiosis Cases by Month and County, January—September 2011



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.

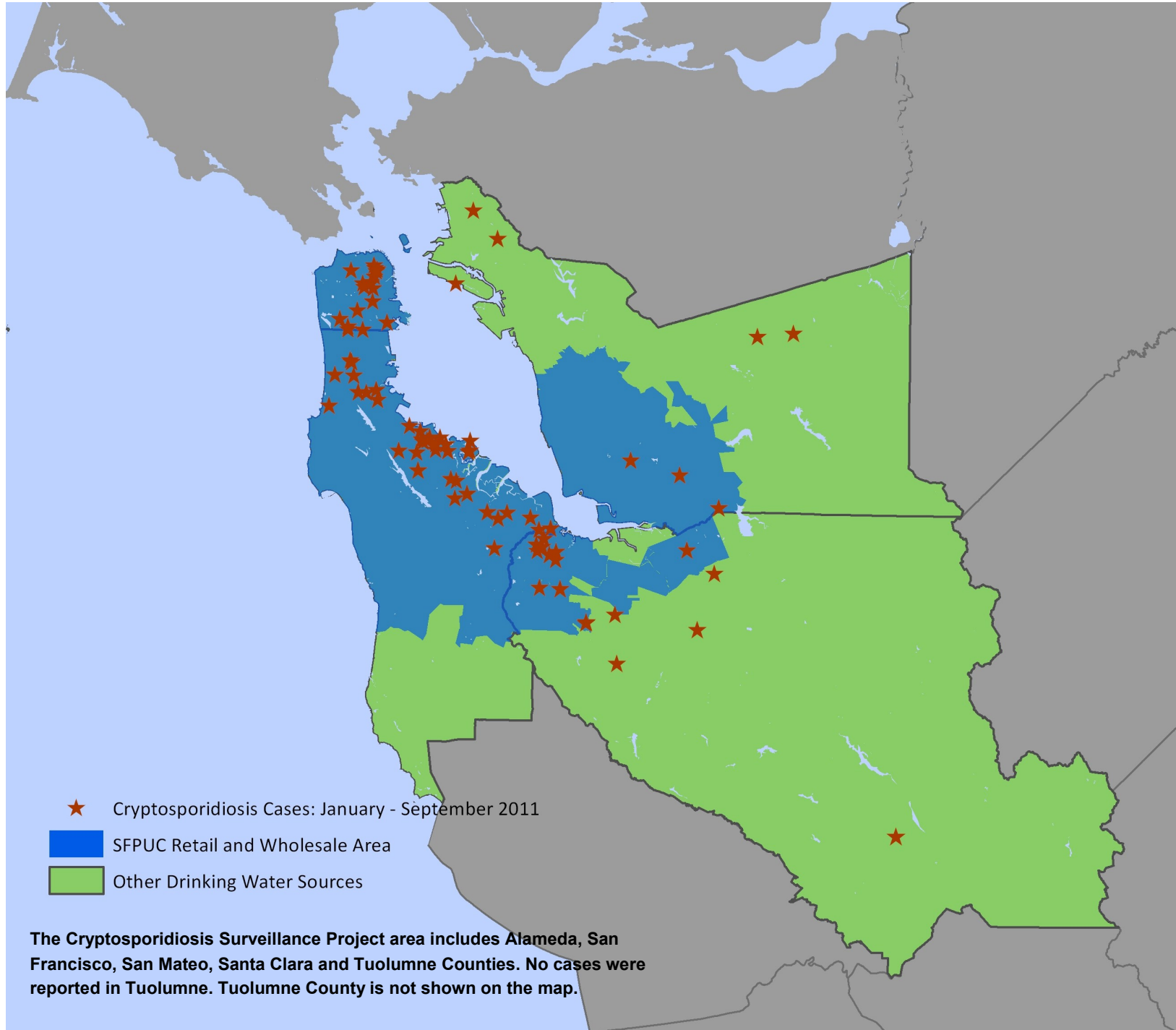
[†] Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– September 2011



The Bay Area Cryptosporidiosis Surveillance Project

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



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 2011: During the fourth quarter of 2011, 24 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.

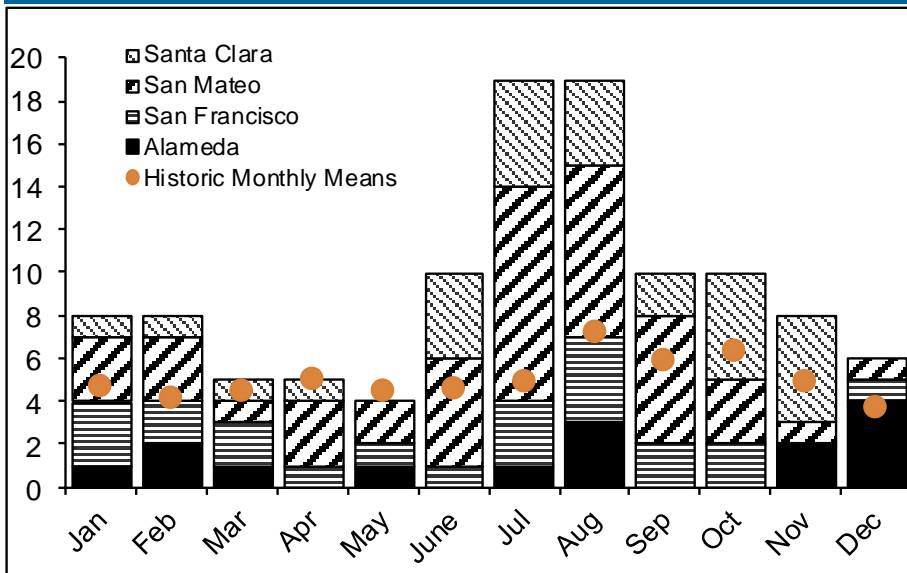
2011 Surveillance: In 2011 a total of 112 cases were reported. No system-wide, drinking water associated or other cryptosporidiosis outbreaks were detected. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to 46 cases or 6.35 cryptosporidiosis cases per 100,000 residents in San Mateo County (Table 1). Compared to 2010, the incidence of cryptosporidiosis increased for all 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, 2011

County	N	Cumulative Incidence per 100,000 [‡]
Alameda	15	0.99
San Francisco	22	2.71
San Mateo	46	6.35
Santa Clara	29	1.61
Tuolumne	0	NA
Total	112	2.28

[‡] 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, 2010 and 2011. Sacramento, California, May 2011.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2011 - December 2011

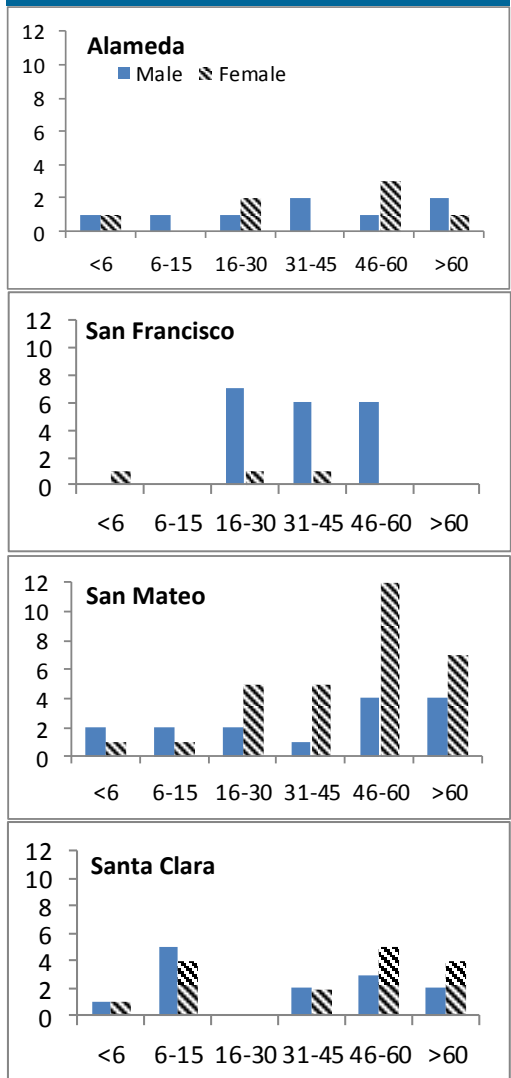


No cases reported in Tuolumne County.

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

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

Figure 2: Case Counts by County, Age and Sex, January–December 2011



Cryptosporidiosis Case Demographics and Risk Factors

In 2011, 44 (39%) of cryptosporidiosis cases were white and 55 (49%) were male. Data on race/ethnicity were not collected for 29 (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 2011, 9 (8%) reported contact with a suspected case during the incubation period. Thirty-four (37%) cases over age 15 reported sexual contact during the incubation period; twelve adult male cases reported MSM activity. Thirteen (12%) cases reported compromised immune status. Sixty-two (55%) cases reported contact with animals during the incubation period; eight (7%) had contact with farm or non-domesticated animals. Twenty-one (19%) cases reported foreign travel. Thirty-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, 2011		
	N	(%) by County
Alameda		
Male	8	(53%)
White	4	(27%)
Other/Unknown	11	(73%)
San Francisco		
Male	19	(86%)
White	11	(50%)
Black	4	(18%)
Asian	2	(9%)
Hispanic	3	(14%)
Other/Unknown	2	(9%)
San Mateo		
Male	15	(33%)
White	18	(39%)
Asian	3	(6%)
Hispanic	10	(22%)
Other/Unknown	15	(33%)
Santa Clara		
Male	13	(45%)
White	11	(38%)
Asian	4	(14%)
Hispanic	3	(10%)
Other/Unknown	11	(38%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2011		
Risk Factor	County	(%)
Contact with Suspect Case	Alameda	(7%)
	San Francisco	(5%)
	San Mateo	(9%)
	Santa Clara	(10%)
Daycare	Alameda	(27%)
	San Mateo	(11%)
	Santa Clara	(10%)
Workcare	Alameda	(7%)
	San Francisco	(5%)
	San Mateo	(13%)
	Santa Clara	(7%)
Sexual Activity*	Alameda	(33%)
	San Francisco	(48%)
	San Mateo	(30%)
	Santa Clara	(44%)
MSM**	Alameda	(33%)
	San Francisco	(47%)
	Santa Clara	(3%)
Contact with Farm or Non-Domesticated Animals	Alameda	(7%)
	San Francisco	(9%)
	San Mateo	(7%)
	Santa Clara	(7%)
Immune Suppression	Alameda	(7%)
	San Francisco	(41%)
	San Mateo	(4%)
	Santa Clara	(3%)
Foreign Travel	Alameda	(20%)
	San Francisco	(14%)
	San Mateo	(17%)
	Santa Clara	(24%)
Recreational Water Contact ***	Alameda	(33%)
	San Francisco	(18%)
	San Mateo	(28%)
	Santa Clara	(38%)
* 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. For more information on CSP data collection and methods used to calculate timeliness please see "Timeliness of Cryptosporidiosis Notification" online at <http://www.sfpbes.org/component/jdownloads/viewcategory/14-cryptosporidium?Itemid=62>

In 2011, CSP received case notification of positive cryptosporidium laboratory results for 63% of the 112 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 2011. 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, 2011

	N	Median	Min	Max
2011	112	6	1	253
Quarter				
Quarter 1	21	6	2	253
Quarter 2	19	7	1	125
Quarter 3	48	5	1	56
Quarter 4	24	8	1	103
Informant				
California Emerging Infections program	24	9	2	253
Clinical Diagnostic Laboratory	46	5	1	39
County Health Department	42	6	1	125
County				
Alameda	15	9	2	253
San Francisco	22	8	1	15
San Mateo	46	5	1	125
Santa Clara	29	5	2	43

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2011

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	11	16	2	253
	Clinical Diagnostic Laboratory	3	9	8	13
	Quarter 1	4	16	3	253
	Quarter 2	1	21	21	21
	Quarter 3	4	8	6	13
San Francisco	Quarter 4	6	13	2	103
	California Emerging Infections Program	1	4	4	4
	San Francisco Communicable Disease Control	19	8	1	14
	Quarter 1	7	12	5	14
	Quarter 2	3	9	1	15
San Mateo	Quarter 3	10	5	1	12
	Quarter 4	3	8	4	11
	Clinical Diagnostic Laboratory	35	5	1	39
	San Mateo County Health Services Agency	8	6	5	125
	Quarter 1	7	5	4	10
Santa Clara	Quarter 2	10	7	2	125
	Quarter 3	24	5	1	56
	Quarter 4	5	3	1	4
	Clinical Diagnostic Laboratory	6	6	4	7
	Santa Clara County Public Health Department	14	5	2	43
Santa Clara	Quarter 1	3	5	2	5
	Quarter 2	5	6	3	7
	Quarter 3	11	5	3	43
	Quarter 4	10	8	3	18

This report was created in April 2012 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.sfpbes.org/elements/water>

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.

The San Francisco Bay Area Cryptosporidiosis Surveillance Project (CSP)

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Surveillance Summary: First Quarter 2012:

During the first quarter of 2012, 18 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2011. 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 2012

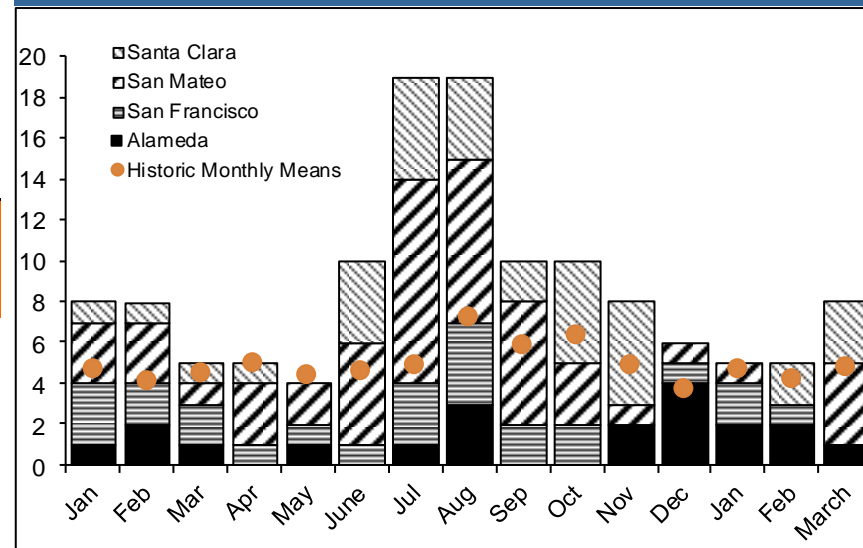
County	Number of Cases	% Male	Cumulative Incidence per
Alameda	5	60%	0.33
San Francisco	3	100%	0.37
San Mateo	5	20%	0.69
Santa Clara	5	40%	0.28
Tuolumne	0	NA	NA
Total	18	50%	0.37

‡ 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, 2010 and 2011. Sacramento, California, May 2011.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2012.
- Figure 1: Monthly case totals by county for January 2011 through March 2012.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through March 2012.

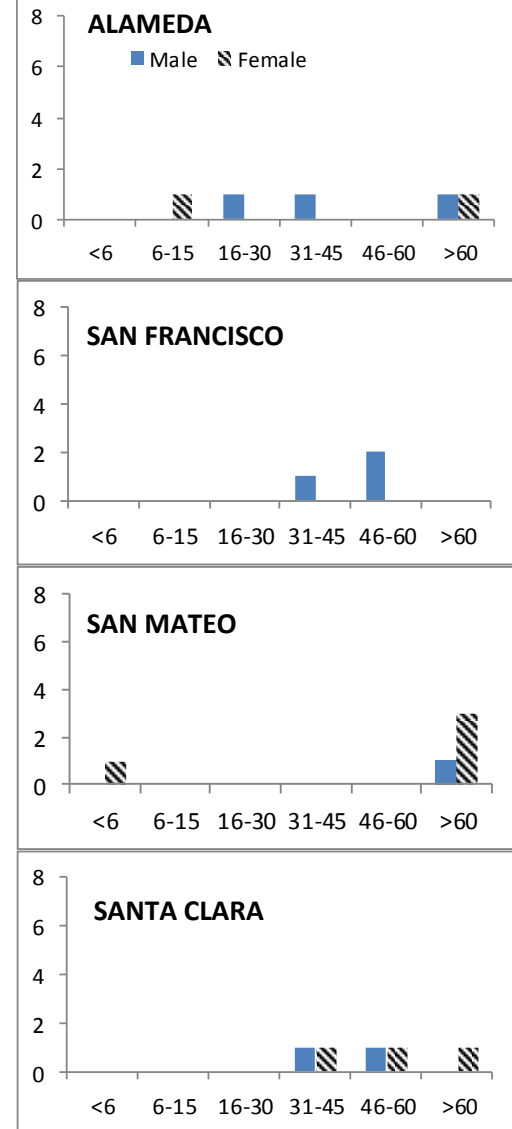
Figure 1: Cryptosporidiosis Cases by Month and County, January—March 2012



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.

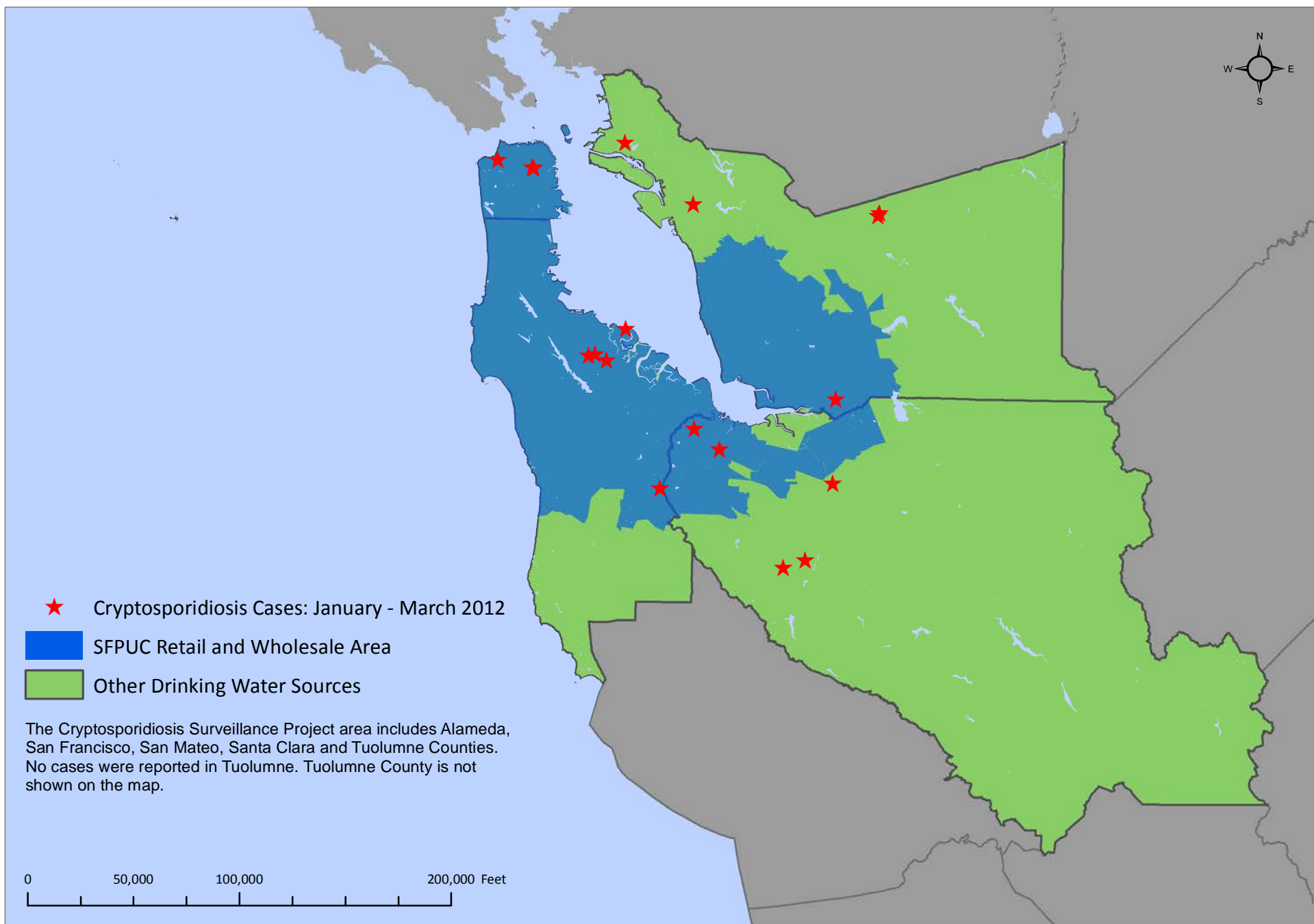
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2012



The Bay Area Cryptosporidiosis Surveillance Project

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



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 2012:

During the first and second quarter of 2012, 49 cryptosporidiosis cases were reported. A higher number of cases were reported than in the same period in 2011. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

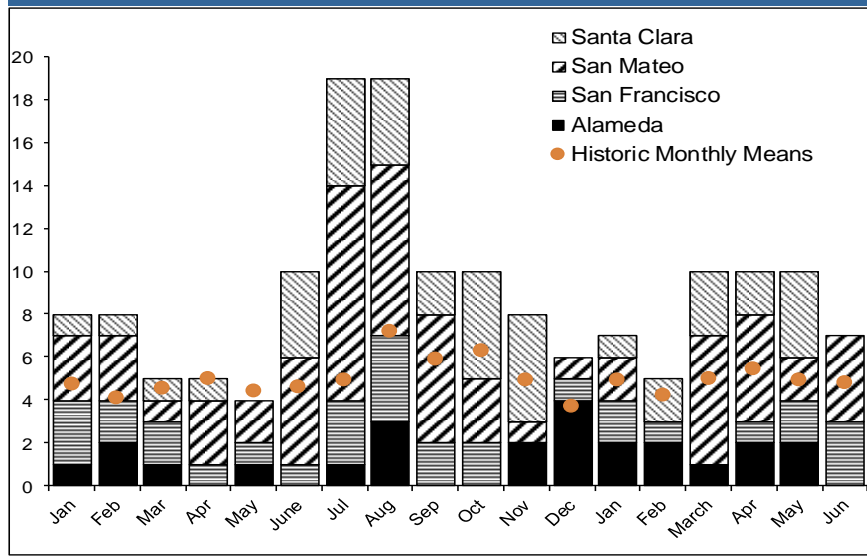
Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January – July 2012			
County	N	% Male	Cumulative Incidence per 100,000 [‡]
Alameda	9	44%	0.59
San Francisco	9	78%	1.11
San Mateo	19	37%	2.60
Santa Clara	12	42%	0.66
Tuolumne	0	NA	NA
Total	49	47%	0.99

[‡] 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, 2011 and 2012. Sacramento, California, May 2012.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2012.
- Figure 1: Monthly case totals by county for January 2011 through June 2012.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through June 2012.

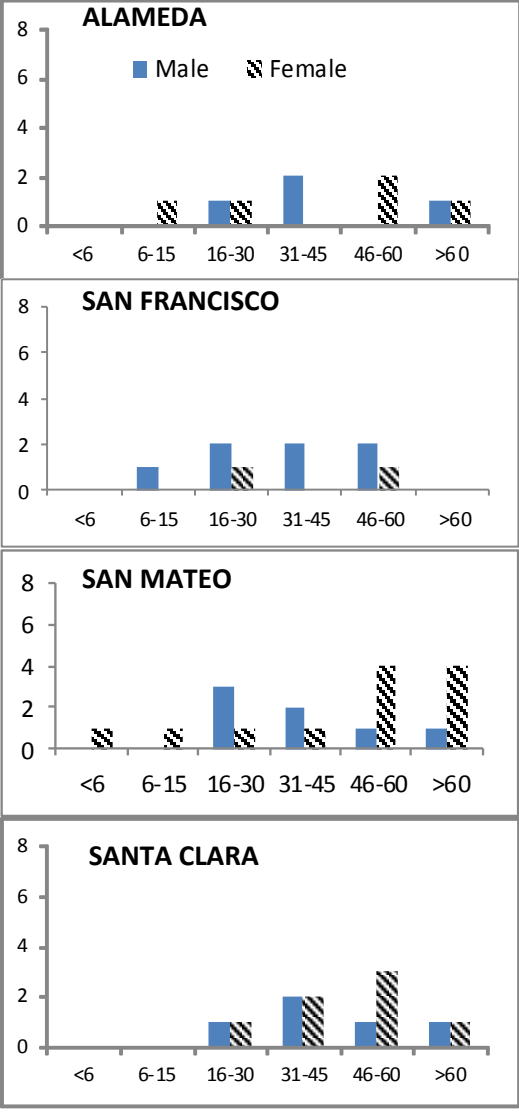
Figure 1: Cryptosporidiosis Cases by Month and County, January 2011—June 2012



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.

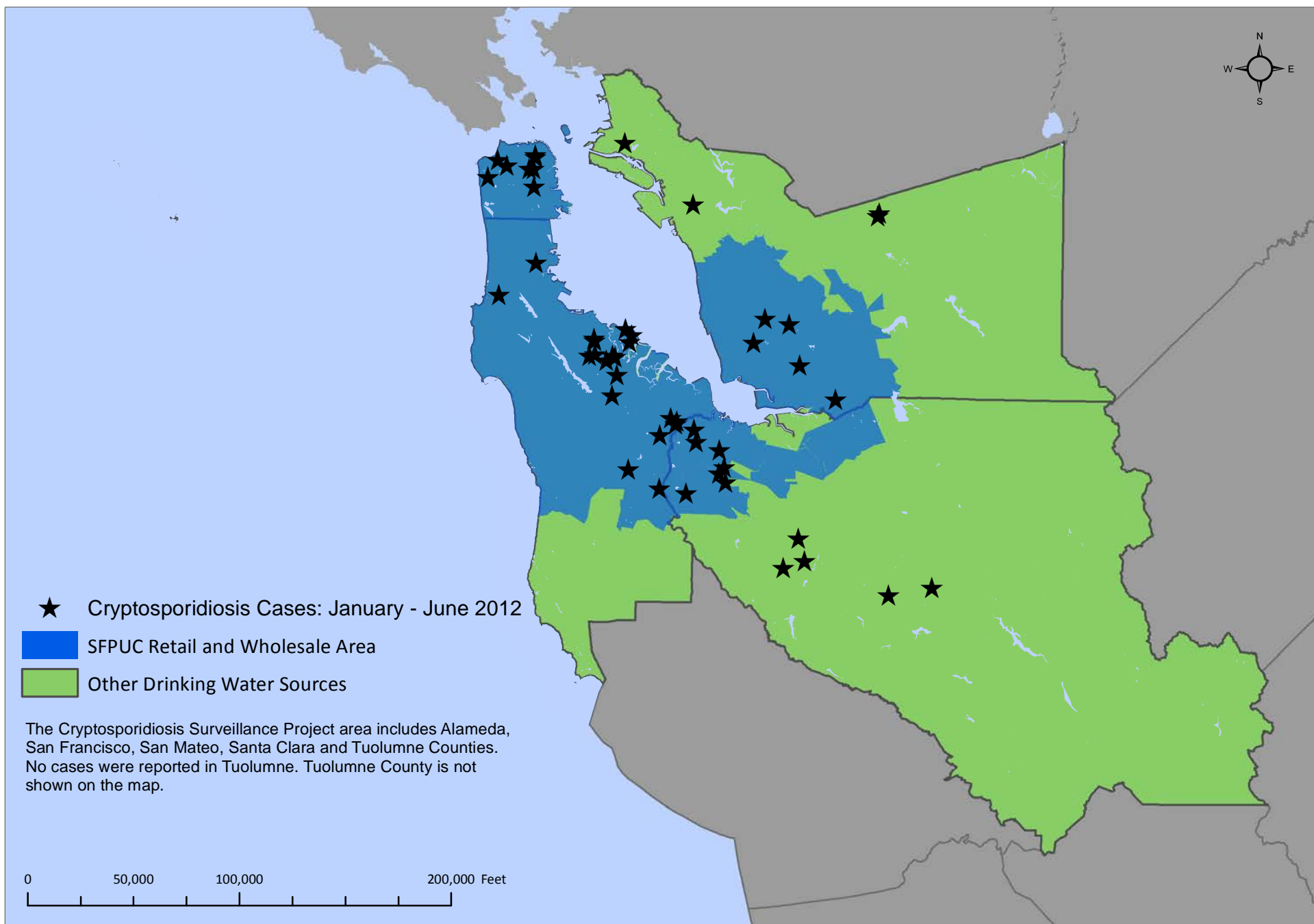
[†] Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– June 2012



The Bay Area Cryptosporidiosis Surveillance Project

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



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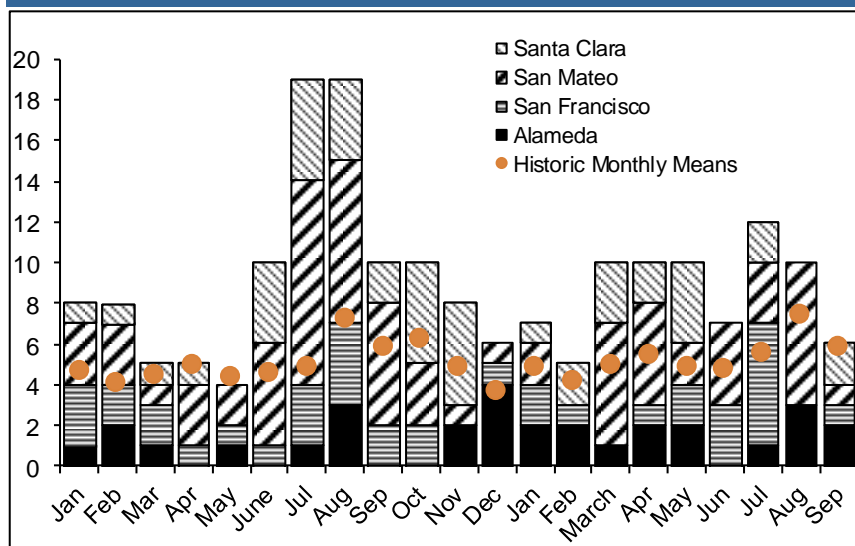
Surveillance Summary: Third Quarter 2012:

During the first, second, and third quarters of 2012, 77 cryptosporidiosis cases were reported. A lower number of cases were reported than in the same period in 2011. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2012.
- Figure 1: Monthly case totals by county for January 2011 through September 2012.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through September 2012.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2011—September 2012



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–September 2012

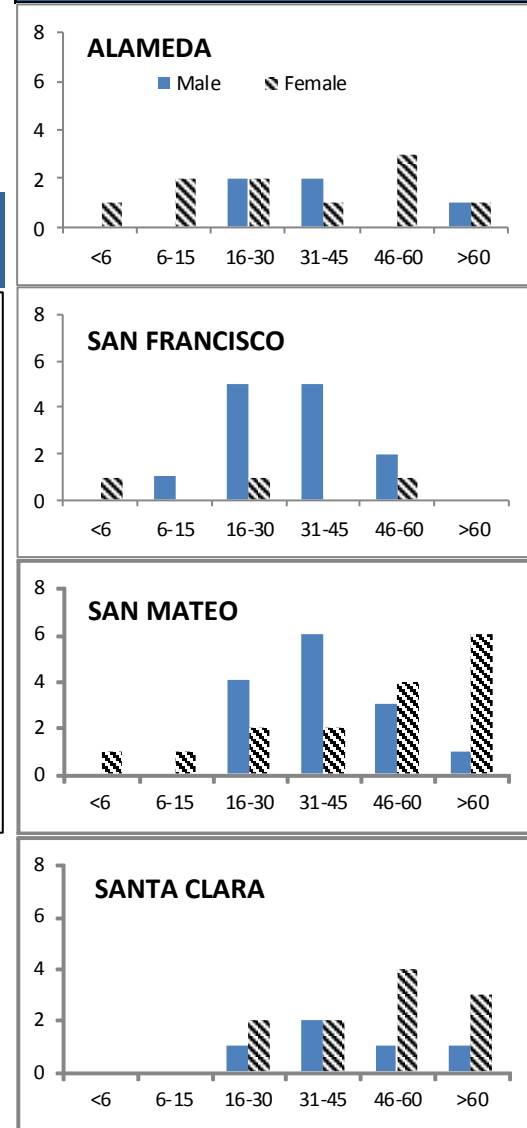


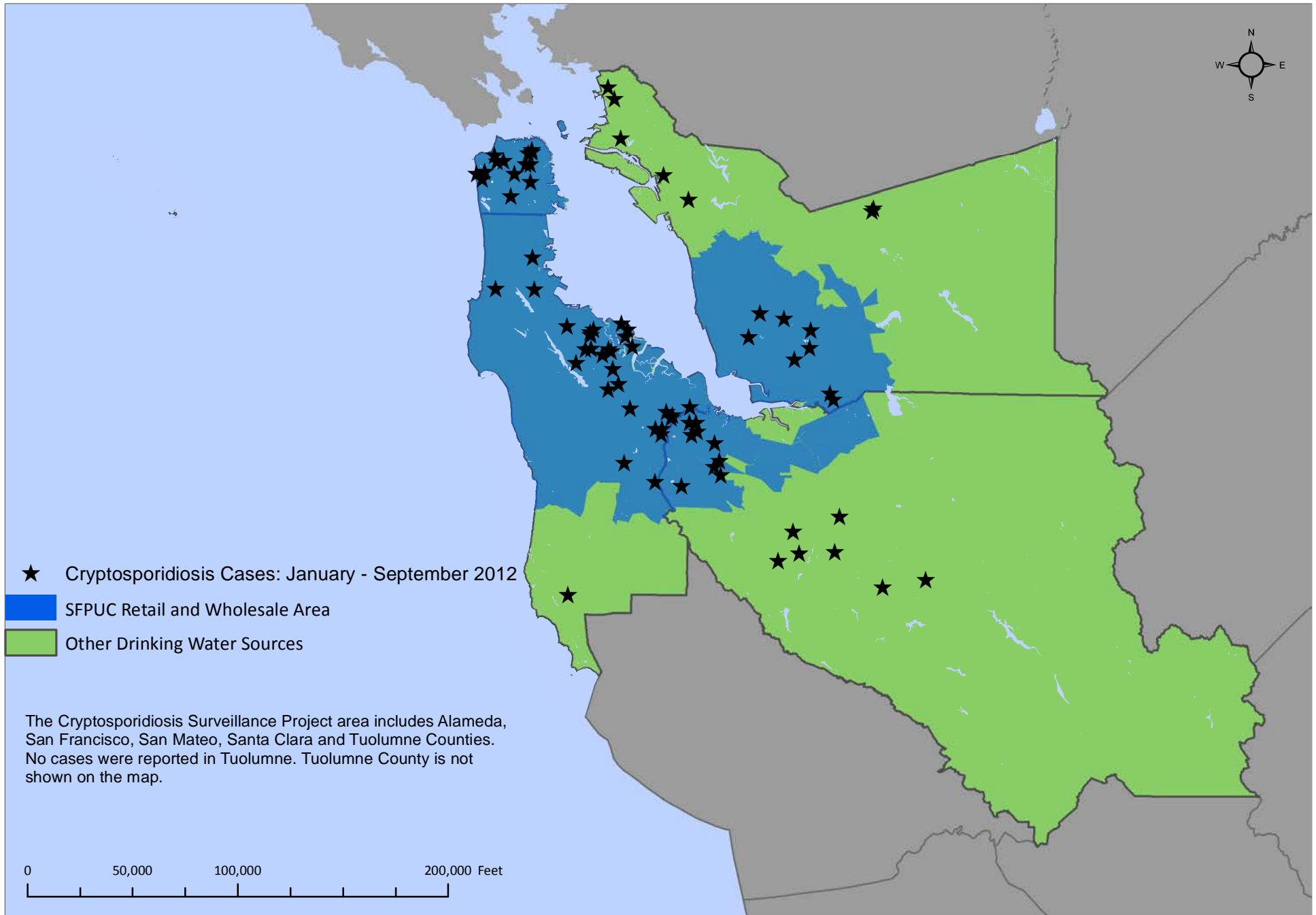
Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January – July 2012

County	N	% Male	Cumulative Incidence per 100,000‡
Alameda	15	33%	0.98
San Francisco	16	81%	1.97
San Mateo	30	47%	4.11
Santa Clara	16	31%	0.88
Tuolumne	0	NA	NA
Total	77	48%	1.56

‡ 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, 2011 and 2012. Sacramento, California, May 2012.

The Bay Area Cryptosporidiosis Surveillance Project

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



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 2012: During the fourth quarter of 2012, 21 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.

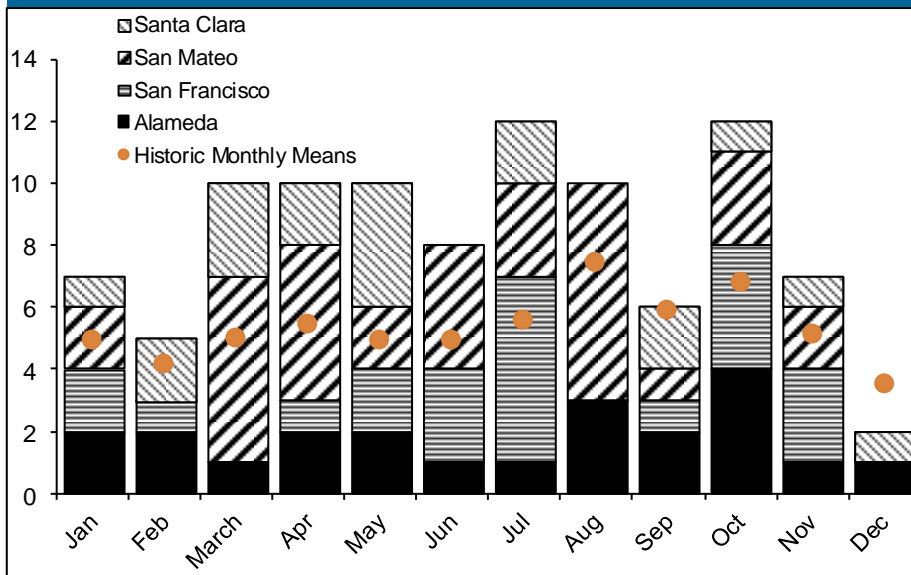
2012 Surveillance: In 2012 a total of 99 cases were reported. No system-wide, drinking water associated or other cryptosporidiosis outbreaks were detected. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to 35 cases or 4.80 cryptosporidiosis cases per 100,000 residents in San Mateo County (Table 1). Compared to 2011, the incidence of cryptosporidiosis increased for San Francisco and Alameda counties and decreased for 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, 2012

County	N	Cumulative Incidence per 100,000 [‡]
Alameda	22	1.44
San Francisco	23	2.83
San Mateo	35	4.80
Santa Clara	19	1.05
Tuolumne	0	NA
Total	99	2.00

[‡] 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, 2011 and 2012. Sacramento, California, May 2012.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2012 - December 2012

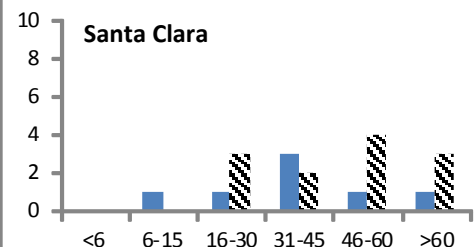
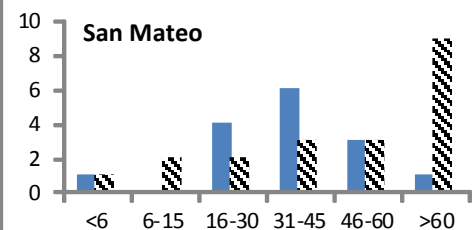
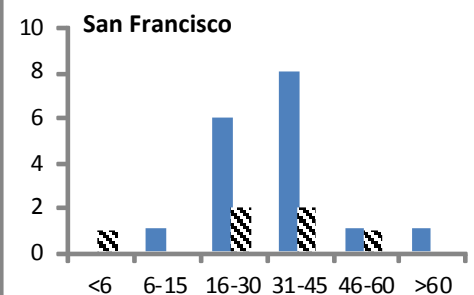
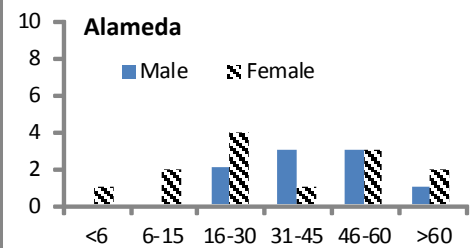


No cases reported in Tuolumne County.

Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010-2011. Data from 2006 have been omitted due to an outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from presumed laboratory errors.

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

Figure 2: Case Counts by County, Age and Sex, January–December 2012



Cryptosporidiosis Case Demographics and Risk Factors

In 2012, 47 (47%) of cryptosporidiosis cases were white and 48 (48%) were male. Data on race/ethnicity were not collected for 26 (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 2012, 13 (13%) reported contact with a suspected case during the incubation period. Thirty-two (32%) cases over age 15 reported sexual contact during the incubation period; ten adult male cases reported MSM activity. Eleven (11%) cases reported compromised immune status. Thirty-nine (39%) cases reported contact with animals during the incubation period; five (5%) had contact with farm or non-domesticated animals. Twenty-nine (29%) cases reported foreign travel. Thirty (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, 2012

	N	(%) by County
Alameda		
Male	9	(41%)
White	7	(32%)
Black	3	(14%)
Asian	5	(23%)
Hispanic	4	(18%)
Other/Unknown	3	(14%)
San Francisco		
Male	17	(74%)
White	12	(52%)
Black	2	(9%)
Asian	1	(4%)
Hispanic	2	(9%)
Other/Unknown	6	(26%)
San Mateo		
Male	15	(43%)
White	19	(54%)
Asian	2	(6%)
Hispanic	4	(11%)
Other/Unknown	9	(26%)
Multiple	1	(3%)
Santa Clara		
Male	7	(37%)
White	9	(47%)
Asian	2	(11%)
Other/Unknown	8	(42%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2012

Risk Factor	County	(%)
Contact with Suspect Case	Alameda	(11%)
	San Francisco	(37%)
	San Mateo	(3%)
	Santa Clara	(21%)
Daycare	Alameda	(11%)
	San Mateo	(13%)
	Santa Clara	(7%)
Workcare	Alameda	(6%)
	Santa Clara	(7%)
Sexual Activity*	Alameda	(17%)
	San Francisco	(47%)
	San Mateo	(41%)
	Santa Clara	(50%)
MSM**	Alameda	(6%)
	San Francisco	(37%)
	San Mateo	(3%)
	Santa Clara	(7%)
Contact with Farm or Non-Domesticated Animals	Alameda	(6%)
	San Francisco	(5%)
	San Mateo	(6%)
	Santa Clara	(1%)
Immune Suppression	Alameda	(22%)
	San Francisco	(21%)
	San Mateo	(6%)
	Santa Clara	(7%)
Foreign Travel	Alameda	(28%)
	San Francisco	(53%)
	San Mateo	(31%)
	Santa Clara	(29%)
Recreational Water Contact ***	Alameda	(44%)
	San Francisco	(32%)
	San Mateo	(44%)
	Santa Clara	(21%)
* 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. For more information on CSP data collection and methods used to calculate timeliness please see "Timeliness of Cryptosporidiosis Notification" online at <http://www.sfpbes.org/component/jdownloads/viewcategory/14>

In 2012, CSP received case notification of positive *Cryptosporidium* laboratory results for 56% of the 99 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 83% of cases in 2012. 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, 2012

	N	Median	Min	Max
2012	99	6	1	235
Quarter				
Quarter 1	22	12	3	111
Quarter 2	28	5	1	235
Quarter 3	28	6	1	23
Quarter 4	21	7	1	117
Informant				
California Emerging Infections Program	48	11	1	235
Clinical Diagnostic Laboratory	24	3	1	15
County Health Department	23	5	2	14
County				
Alameda	22	11	4	235
San Francisco	23	4	1	79
San Mateo	35	7	1	103
Santa Clara	19	6	3	111

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2012

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	19	12	4	235
	Alameda County Public Health Department	2	5	4	5
	Quarter 1	5	36	4	91
	Quarter 2	5	5	4	235
	Quarter 3	6	8	6	12
San Francisco	Quarter 4	6	28	5	117
	California Emerging Infections Program	6	8	6	79
	Clinical Diagnostic Laboratory	12	3	1	15
	Quarter 1	3	6	4	15
	Quarter 2	6	5	1	10
San Mateo	Quarter 3	7	4	2	6
	Quarter 4	7	4	1	79
	Clinical Diagnostic Laboratory	11	3	1	15
	San Mateo County Health Services Agency	6	7	3	14
	Quarter 1	8	10	3	103
Santa Clara	Quarter 2	11	5	1	14
	Quarter 3	11	8	1	23
	Quarter 4	5	7	2	19
	California Emerging Infections Program	5	6	5	111
	Santa Clara County Public Health Department	14	6	3	14
Santa Clara	Quarter 1	6	10	4	111
	Quarter 2	6	5	3	9
	Quarter 3	4	7	5	10
	Quarter 4	3	4	4	5

This report was created in March 2013 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.sfpbes.org/elements/water>

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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 2013:

During the first quarter of 2013, 11 cryptosporidiosis cases were reported. A lower number of cases were reported than in the same period in 2012. 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 2013

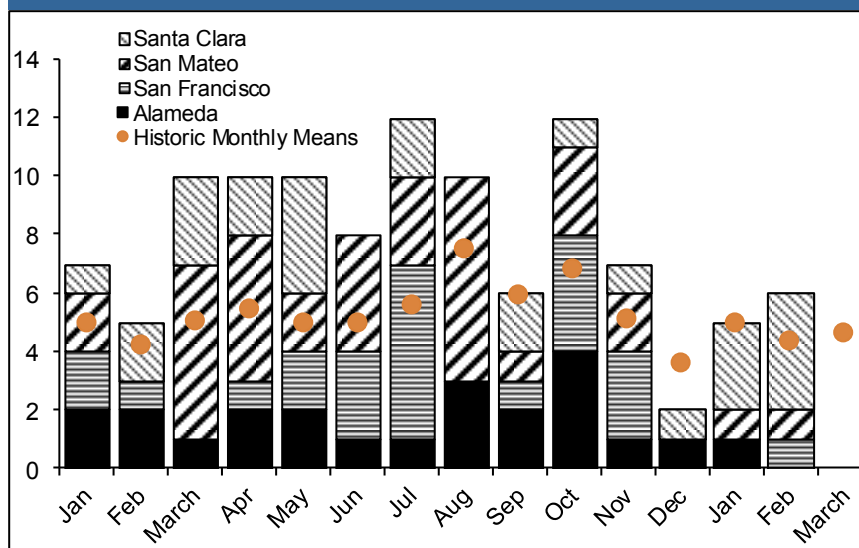
County	N	% Male	Cumulative Incidence per 100,000†
Alameda	1	0%	0.06
San Francisco	1	100%	0.12
San Mateo	2	50%	0.27
Santa Clara	7	29%	0.38
Tuolumne	0	NA	NA
Total	11	36%	0.22

† 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, 2012 and 2013. Sacramento, California, May 2013.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through March 2013.
- Figure 1: Monthly case totals by county for January 2012 through March 2013.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through March 2013.

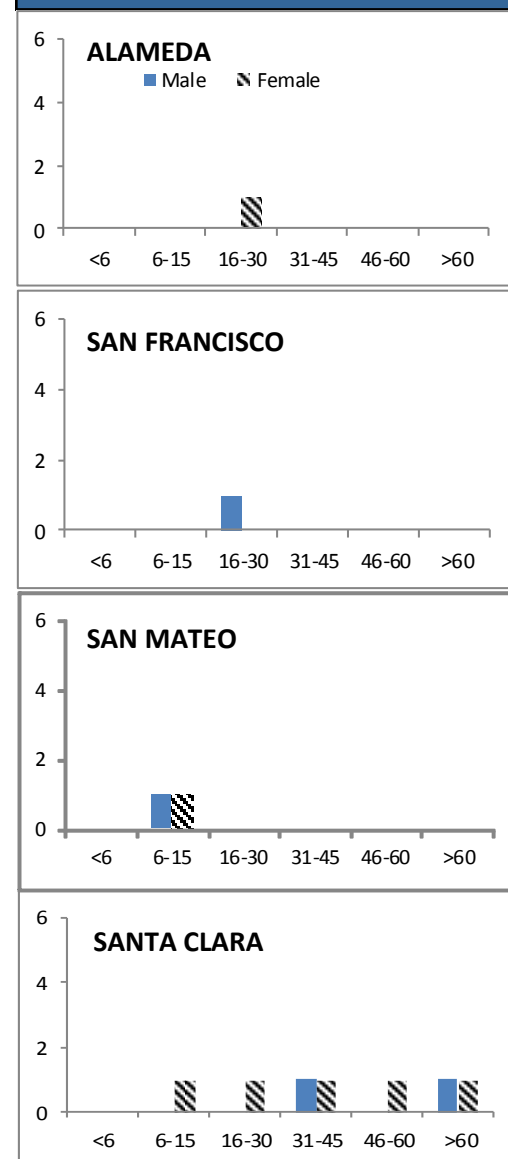
Figure 1: Cryptosporidiosis Cases by Month and County, January—March 2013



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.

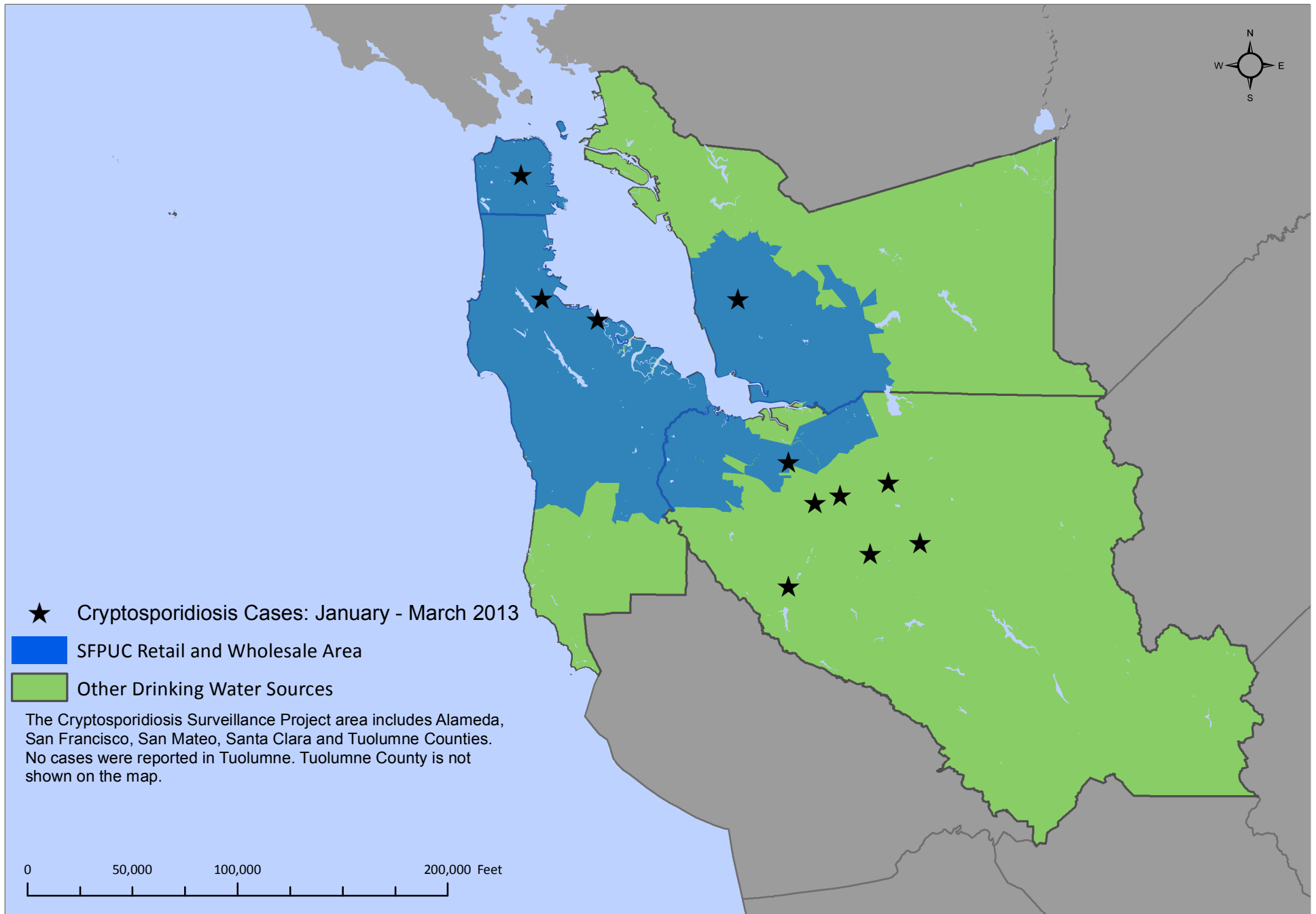
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January– March 2013



The Bay Area Cryptosporidiosis Surveillance Project

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



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 2013:

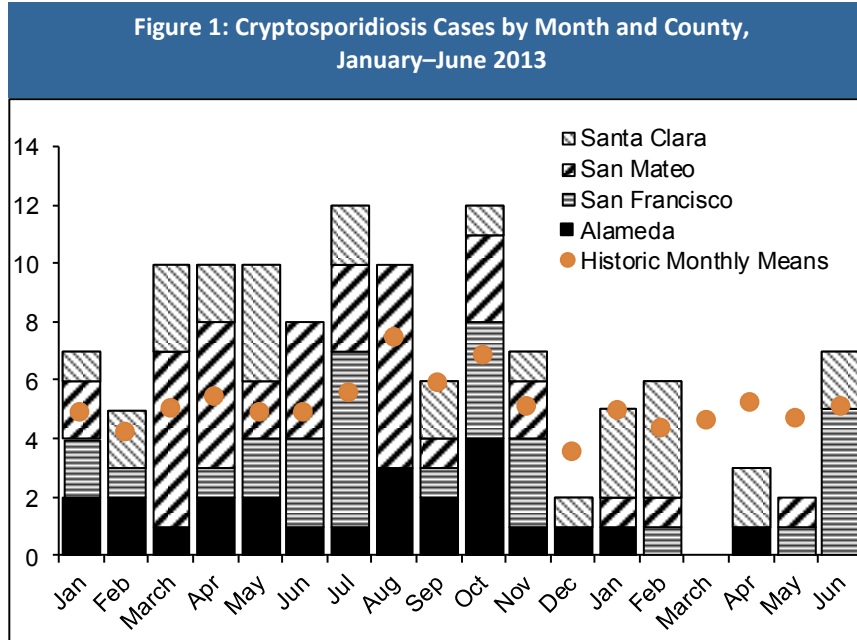
During the first and second quarter of 2013, 23 cryptosporidiosis cases were reported. A lower number of cases were reported than in the same period in 2012. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–June 2013			
County	N	% Male	Cumulative Incidence per 100,000 [‡]
Alameda	2	0%	0.13
San Francisco	7	100%	0.85
San Mateo	3	33%	0.41
Santa Clara	11	36%	0.60
Tuolumne	0	NA	NA
Total	23	52%	0.46

[‡] 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, 2012 and 2013. Sacramento, California, May 2013.

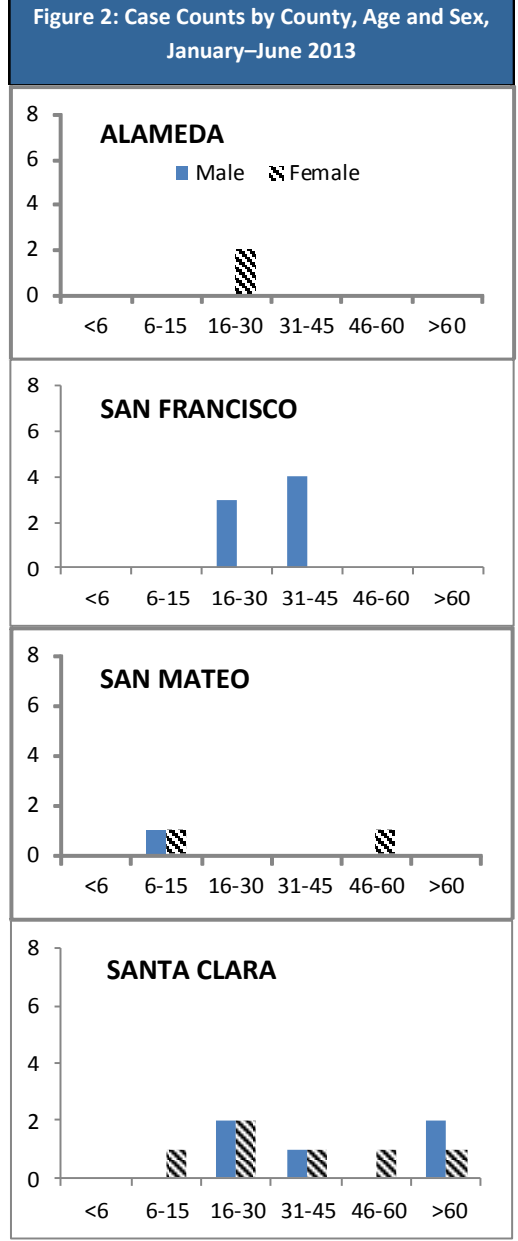
Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through June 2013.
- Figure 1: Monthly case totals by county for January 2012 through June 2013.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through June 2013.



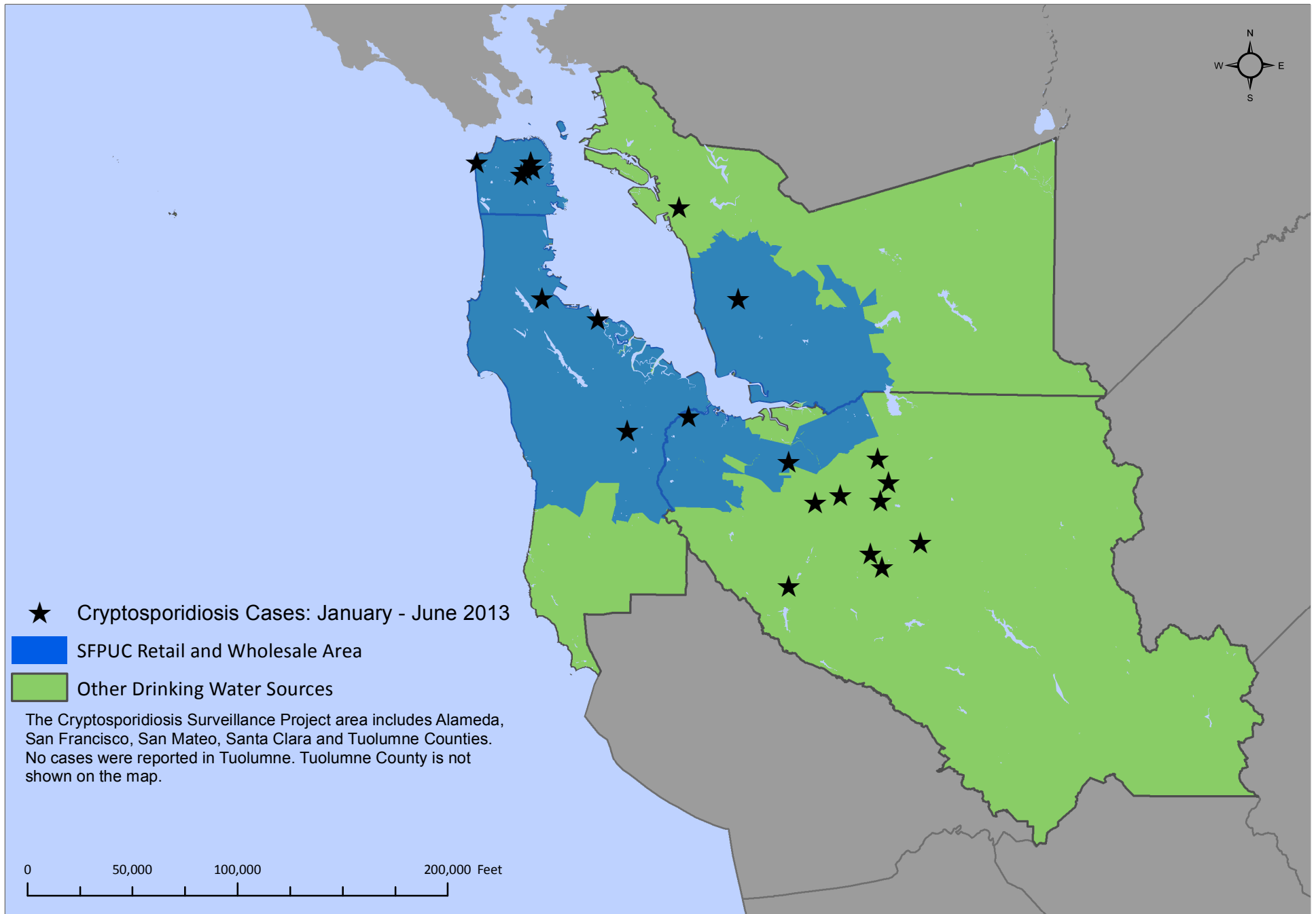
Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010. Data from 2006 have been omitted due to a recreational water-related outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from laboratory errors. There were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

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



The Bay Area Cryptosporidiosis Surveillance Project

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



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 2013:

During the first, second and third quarters of 2013, 54 cryptosporidiosis cases were reported. A lower number of cases were reported than in the same period in 2012. No system-wide, drinking water associated cryptosporidiosis outbreaks were detected, nor were any other common exposures identified among cases.

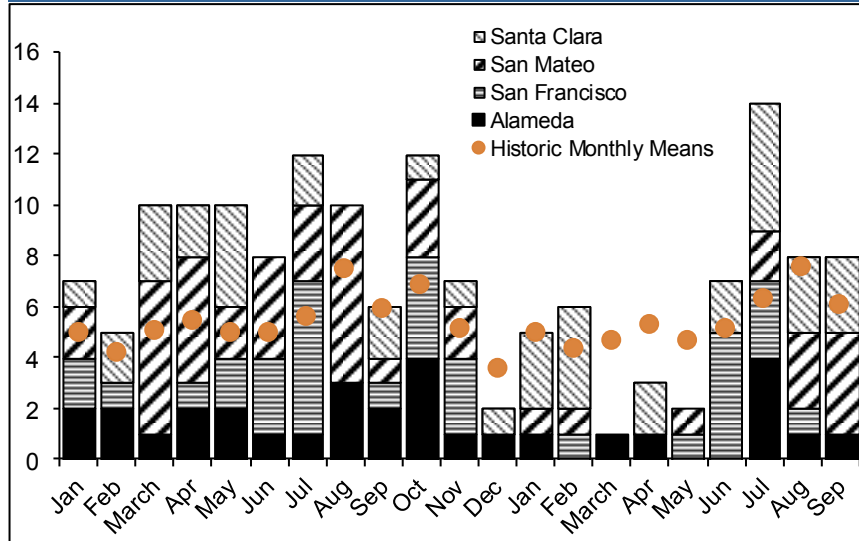
Table 1: Number, Gender and Cumulative Incidence of Cryptosporidiosis Cases by County, January–September 2013			
County	N	% Male	Cumulative Incidence per 100,000†
Alameda	9	44%	0.58
San Francisco	11	100%	1.33
San Mateo	12	33%	1.63
Santa Clara	22	36%	1.19
Tuolumne	0	NA	NA
Total	54	50%	1.08

† 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, 2012 and 2013. Sacramento, California, May 2013.

Graphics and Tables:

- Table 1: Cryptosporidiosis case totals, gender ratio and cumulative incidence by county for January through September 2013.
- Figure 1: Monthly case totals by county for January 2012 through September 2013.
- Figure 2: Cryptosporidiosis case counts by county, age group, and sex for January through September 2013.

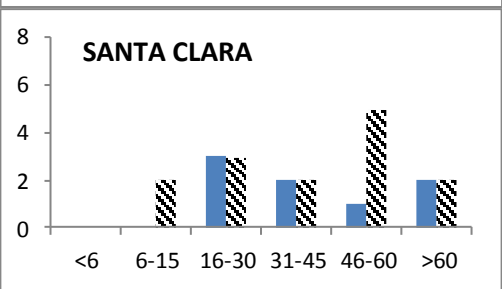
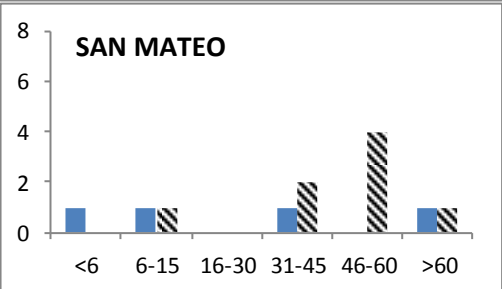
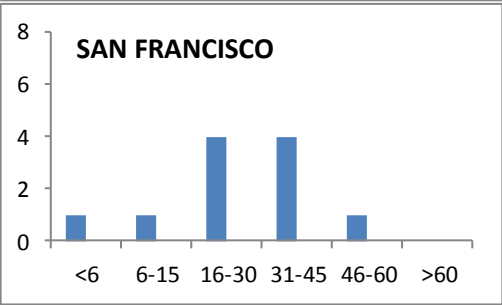
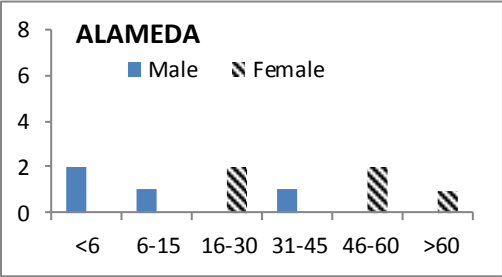
Figure 1: Cryptosporidiosis Cases by Month and County, January–September 2013



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.

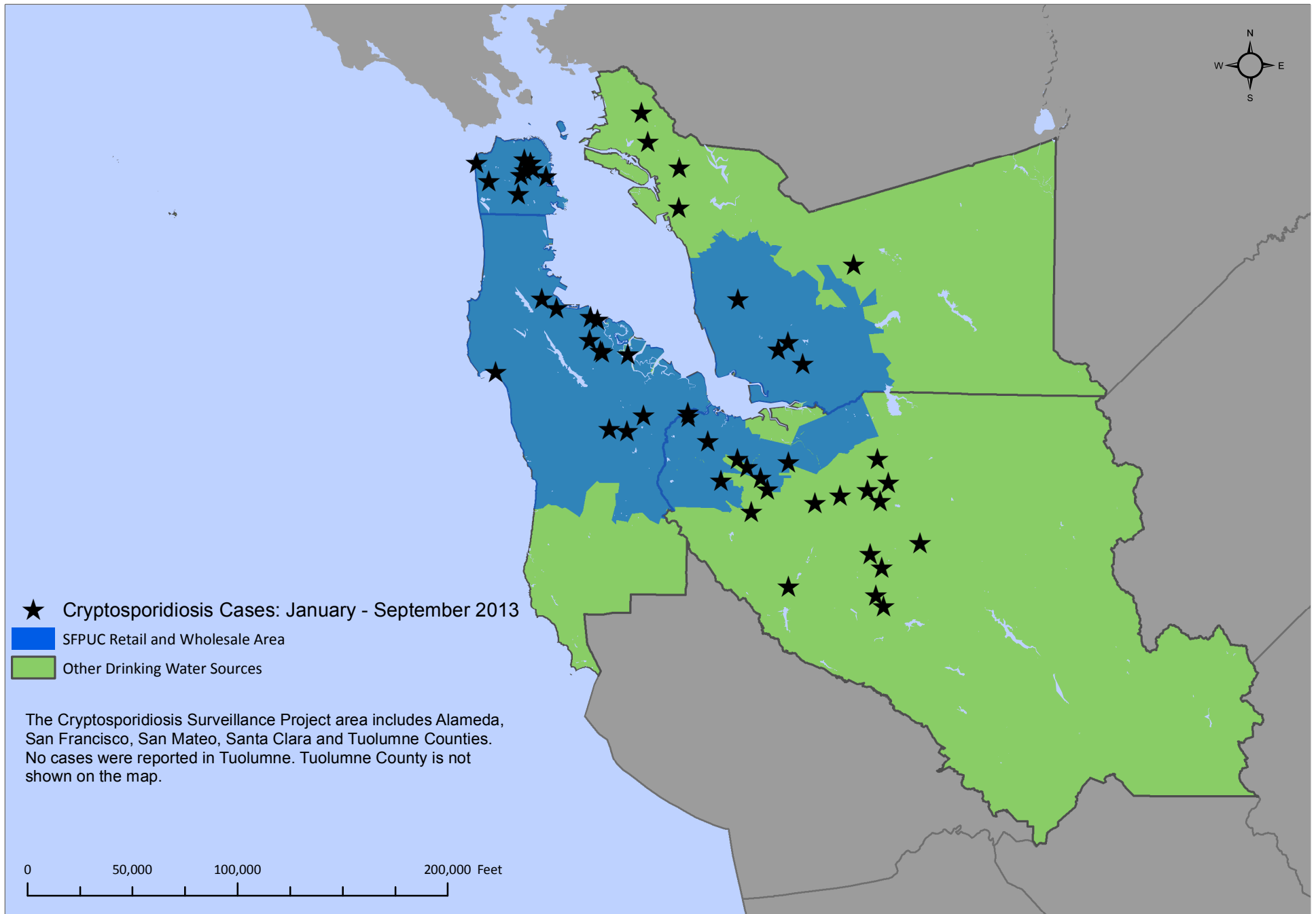
† Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–September 2013



The Bay Area Cryptosporidiosis Surveillance Project

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



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 2013: During the fourth quarter of 2013, 16 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.

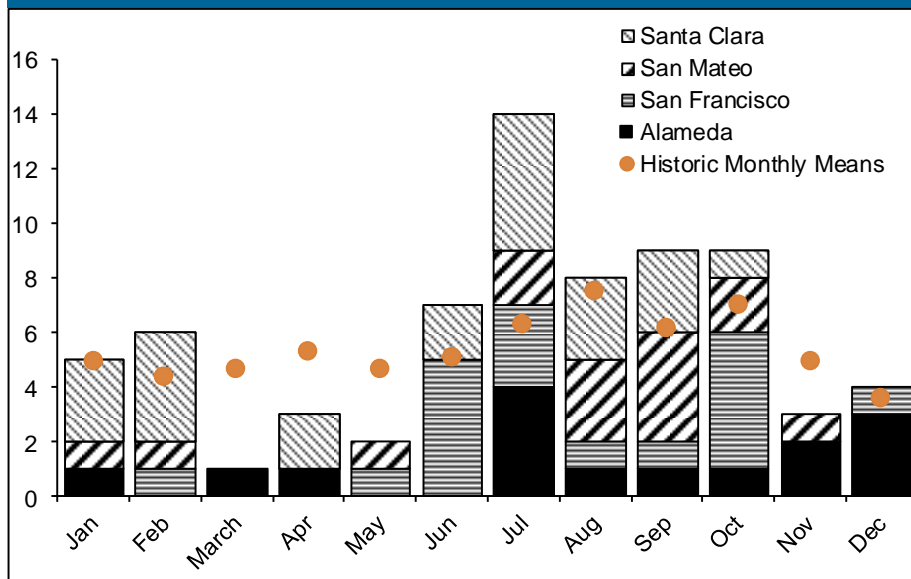
2013 Surveillance: In 2013 a total of 71 cases were reported. No system-wide, drinking water associated or other cryptosporidiosis outbreaks were detected. Case counts and cumulative incidence (CI) varied by county ranging from 0 cases in Tuolumne County to 23 cases or 1.25 cryptosporidiosis cases per 100,000 residents in San Clara County (Table 1). Compared to 2012, the incidence of cryptosporidiosis decreased for San Francisco, Alameda and San Mateo counties and increased for Santa Clara county. 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, 2013

County	N	Cumulative Incidence per 100,000 [‡]
Alameda	15	0.97
San Francisco	18	2.18
San Mateo	15	2.04
Santa Clara	23	1.25
Tuolumne	0	NA
Total	70	1.42

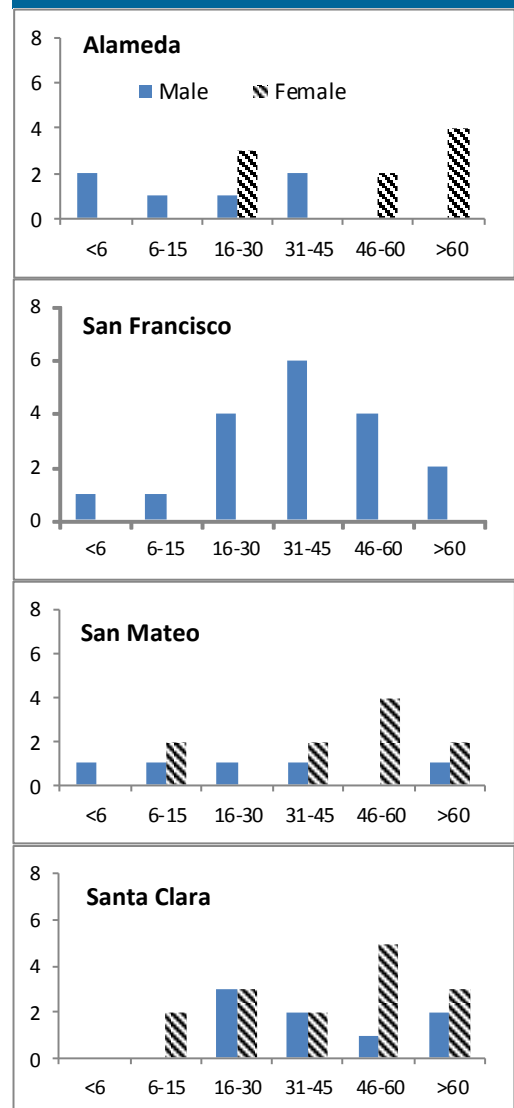
[‡] Cumulative incidences were calculated using the following population estimates: State of California, Department of Finance, E-1 population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2012 and 2013. Sacramento, California, May 2013.

Figure 1: Cryptosporidiosis Cases by Month and County, January 2013 - December 2013



No cases reported in Tuolumne County.
Points represent monthly mean case counts 2000-2005, 2007-2008, and 2010-2011. Data from 2006 have been omitted due to an outbreak in August, September, and October, 2006. Data from 2009 have been omitted due to artificial increases that resulted from presumed laboratory errors.
[†] Historical data obtained through the cooperation of the California Emerging Infections Program.

Figure 2: Case Counts by County, Age and Sex, January–December 2013



Cryptosporidiosis Case Demographics and Risk Factors

In 2013, 38 (54%) of cryptosporidiosis cases were white and 37 (52%) were male. Data on race/ethnicity were not collected for 8 (11%) 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 2013, 9 (13%) reported contact with a suspected case during the incubation period. Nineteen (27%) cases over age 15 reported sexual contact during the incubation period; eight adult male cases reported MSM activity. Fourteen (20%) cases reported compromised immune status. Thirty-six (51%) cases reported contact with animals during the incubation period; seven (10%) had contact with farm or non-domesticated animals. Twenty-four (34%) cases reported foreign travel. Thirty (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, 2013

	N	(%) by County
Alameda		
Male	6	(40%)
White	3	(20%)
Black	2	(13%)
Asian	3	(20%)
Hispanic	4	(27%)
Other/Unknown	3	(20%)
San Francisco		
Male	18	(100%)
White	8	(44%)
Asian	1	(6%)
Hispanic	7	(39%)
Other/Unknown	2	(11%)
San Mateo		
Male	5	(33%)
White	13	(87%)
Asian	1	(7%)
Other/Unknown	1	(7%)
Santa Clara		
Male	8	(35%)
White	14	(61%)
Asian	2	(9%)
Hispanic	5	(22%)
Other/Unknown	2	(9%)

Table 3: Percentage of Cases by County with Known Risk Factors During the Incubation Period, 2013

Risk Factor	County	(%)
Contact with Suspect Case	San Francisco	(22%)
	San Mateo	(7%)
	Santa Clara	(17%)
Daycare	Alameda	(7%)
	San Mateo	(20%)
	Santa Clara	(9%)
Sexual Activity*	Alameda	(7%)
	San Francisco	(39%)
	San Mateo	(20%)
	Santa Clara	(35%)
MSM**	San Francisco	(39%)
	Santa Clara	(4%)
Contact with Farm or Non-Domesticated Animals	Alameda	(13%)
	San Mateo	(7%)
	Santa Clara	(17%)
Immune Suppression	Alameda	(7%)
	San Francisco	(39%)
	San Mateo	(20%)
	Santa Clara	(13%)
Foreign Travel	Alameda	(40%)
	San Francisco	(6%)
	San Mateo	(27%)
	Santa Clara	(57%)
Recreational Water Contact ***	Alameda	(33%)
	San Francisco	(11%)
	San Mateo	(73%)
	Santa Clara	(57%)
* 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. For more information on CSP data collection and methods used to calculate timeliness please see "Timeliness of Cryptosporidiosis Notification" online at <http://www.sfphe.org/component/jdownloads/viewcategory/14>

In 2013, CSP received case notification of positive *Cryptosporidium* laboratory results for 66% of the 71 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 89% of cases in 2013. 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, 2013

	N	Median	Min	Max
2013	71	5	1	153
Quarter				
Quarter 1	12	6	4	153
Quarter 2	12	6	2	91
Quarter 3	31	5	1	115
Quarter 4	15	5	1	83
Informant				
California Emerging Infections Program	25	10	1	153
Clinical Diagnostic Laboratory	18	4	1	19
County Health Department	28	4	2	65
County				
Alameda	15	10	3	153
San Francisco	18	6	1	115
San Mateo	15	5	2	13
Santa Clara	23	4	1	83

Table 5: Median Days Between Specimen Collection and Report to CSP by County, Informant and Quarter, 2013

County	Informant/Quarter	N	Median	Min	Max
Alameda	California Emerging Infections Program	10	12	3	153
	Alameda County Public Health Department	5	7	3	65
	Quarter 1	2	81	9	153
	Quarter 2	1	9	9	9
	Quarter 3	6	16	3	24
San Francisco	California Emerging Infections Program	4	87	28	115
	Clinical Diagnostic Laboratory	14	4	1	19
	Quarter 1	1	11	11	11
	Quarter 2	6	8	2	91
	Quarter 3	5	7	2	115
San Mateo	California Emerging Infections Program	5	7	5	13
	Clinical Diagnostic Laboratory	4	4	3	7
	San Mateo County Health Services Agency	6	5	2	8
	Quarter 1	2	6	4	7
	Quarter 2	1	7	7	7
Santa Clara	California Emerging Infections Program	6	6	1	83
	Clinical Diagnostic Laboratory	1	1	1	1
	Santa Clara County Public Health Department	16	4	2	27
	Quarter 1	7	5	4	83
	Quarter 2	4	4	3	27
	Quarter 3	11	4	1	25
	Quarter 4	1	5	5	5

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