

National Outbreak Reporting System



Waterborne Disease Transmission

This form is used to report waterborne disease outbreak investigations. This form has 6 parts, indicated by tabs at the top of each page. Part 1 asks for the minimum or basic information about the outbreak investigation. Part 2 asks for epidemiological data and clinical specimen test results. Parts 3, 4, 5 and 6 collect information about types of water exposure (treated recreational water, untreated recreational water, drinking water, and water not intended for drinking/unknown intent). Only 1 of these 4 water exposure parts should be completed for an outbreak investigation report.

CDC USE ONLY

CDC Report ID	State Report ID

Form Approved OMB No. 0920-000

					OME	3 No. 0920-0004
General Section						
Primary Mode of Transmission (check one)						
☐ Food (Complete CDC 52.13)		□ Person-to-perso	n (Complete CD	C 52.13)		
☐ Water (Complete tabs for General, Water-General and of water exposure)	l type	☐ Environmental of (Complete CDC 52.		other than f	ood/water	
☐ Animal contact (Complete CDC 52.13)		□ Indeterminate/O	ther/Unknow	ດ (Complete C	DC 52.13)	
Investigation Methods (check all that apply)						
☐ Interviews only of ill persons ☐ Case-control study ☐ Cohort study ☐ Food preparation review ☐ Water system assessment: Drinking water ☐ Water system assessment: Nonpotable wate	er	 □ Treated or untreated recreational water venue assessment □ Investigation at factory/production/treatment plant □ Investigation at original source (e.g., farm, water source, etc.) □ Food product or bottled water traceback □ Environment/food/water sample testing □ Other 				
Dates (mm/dd/yyyy)						
Date first case became ill (required)//_					ill/	
Date of initial exposure//			Date of las		//	
Date of report to CDC (other than this form)/_ Date of notification to State/Territory or Local/Tribal	/					
Date of notification to State/Territory or Local/Tribal	Health Auth	orities//				
Geographic Location						
Reporting state: Exposure occurred in multiple states Exposure occurred in a single state but cases Other states: Reporting county:	resided in n	nultiple states				
☐ Exposure occurred in multiple counties in repo ☐ Exposure occurred in a single county but case Other counties:	s resided in	multiple counties in repor	ting state			
City/Town/Place of exposure:	tory or priva	ata facility namaa				
	tary or prive	ate racility riarries				
Primary Cases						
Number of Primary Cases		(4)	Sex (estimate	d percent of	the primary cas	ses)
# Lab-confirmed cases		(A)	Male			%
# Probable cases # Estimated total primary ill (if greater than sum A+B)		(B)	Female			%
" Estimated total primary in (ii greater than sum // 12)		T.1.1	Annuavimata m			h
	# Cases	Total # of cases for whom info is available	Approximate p	ercent of prim	ary cases in eac	n age group
# Died			<1 year	%	20-49 years	%
# Hospitalized			1–4 years	%	50-74 years	%
# Visited Emergency Room			5–9 years	%	≥ 75 years	%
# Visited health care provider (excluding ER visits)			10-19 years	%	Unknown	%
DC 52.12 Rev. 03 2008		National Outbreak Reporting System				CS115923

Incubation Period, Duration	on of Illness, Signs	or Symptoms fo	or Primary C	ases only	1		
Incubation Period (circle ap		<u>, , , , , , , , , , , , , , , , , , , </u>			among recovered cas	ses-circle ap	propriate units)
Shortest	Shortest Min, Hours, Days			Shortest			lin, Hours, Days
Median		Min, Hours, Days	Hours, Days Median				lin, Hours, Days
Longest		Min, Hours, Days	Longest			M	lin, Hours, Days
Total # of cases for whom info i		· · · · ·	Total # of cas	es for whor	n info is available		
☐ Unknown incubation period			□ Unknown d	luration of il	Iness		
Signs or Symptoms (*refer	to terms from appendix			common ch			
Feature		# Cases with signs	s or symptoms		Total # cases for wh	om info avail	lable
Vomiting							
Diarrhea							
Bloody stools Fever							
Abdominal cramps HUS							
Asymptomatic							
*							
*							
*							
Secondary Cases							
Mode of Secondary Transmission	(check one)		Number of Se	condary Cas	ses		
□ Food			# Lab-confi	irmed seco	ondary cases		(A)
☐ Water☐ Animal contact			# Probable secondary cases		cases		(B)
☐ Person-to-person					ases (if greater than	sum A+R)	
☐ Environmental contamination		r					
☐ Indeterminate/Other/Unkno		Total # of cases (Primary + Secondary)					
Environmental Health Spe	ecialists Network (if	applicable)					
EHS-Net Evaluation ID: 1.) _		2.)			3.)		
Traceback (for food and bottle	ed water only, not public	water)					
☐ Please check if traceback c		•					
Source name	Source type	Locatio	n of source	Commer	its		
(If publicly available)	(e.g. poultry farm, tomato		Country				
	processing plant, bottled water factory)						
Recall							
☐ Please check if any food or	hottled water product w	vas rocalled					
Type of item recalled:	bollied water product w	as recalled					
Comments: Reporting Agency							
Agency name:							
Contact name:		Contact title	e:				
Phone no.:			Fax no.:				
Remarks Briefly describe impo	ortant aspects of the outb	reak not covered abo	ove. Please indic	cate if any a	dverse outcomes occu	rred in speci	al populations
	en, immunocompromised					, open	

	Water-Gene	eral								
	Waterborne Disease and Outbreaks - General									
Type of Water Exposure (check ONE	box)								
□ Water intended for recreation purposes – treated venue (e.g., pool, spa/whirlpool/hotub, spray pad)		untreated ve	purposes – enue (e.g., ake, hot spri		(in	ater intend ncludes wa athing/show	ater used		intent (e.g	intended for water of unknown ., cooling/industrial, aal, decorative/
Geographic Location					Sym	ptoms			Route of E	Entry
Percent of primary cases liv	ing in repo	rting state :		%		each cateo	gory, ind	icate # of		
Associated Events					Gastr	rointestina	l symptoi	ms/	_	
Was avecaure associated wi	th a angaif	io ovent er a	oth oring?		condi	itions			☐ Ingestio	n
Was exposure associated wi ☐ Yes ☐ No	□ Unkno	-	atriering?		Resp condi	iratory syn itions	nptoms/		_ ☐ Contact	
If Yes, what type of event or	gathering	was involved	?		Skin	symptoms	/conditio	ns	_ □ Inhalatio	on
						symptoms/			_ □ Other, s	pecify:
					Eye s	symptoms/	condition	ns		
					Neurologic symptoms/				□ Unknown	
If outbreak occurred during a	a defined e	vent, dates o	of event:		conditions Wound infections				_	
Start date://	End	date:/	/		Other, specify (e.g.,					
(mm/dd/yyyy)			m/dd/yyyy)		hepatitis A, leptospirosis):					
								_		
Epidemiologic Data										
1. Estimated total number of	persons w	ith primary	exposure: _							
2. Were data collected from	compariso	n groups to	estimate risk	(? □ \	Yes (sp	ecify in tal	ble belov	v) 🗆 N	0	□ Unknown
If No or Unknown , was shared by persons			non source		Yes				0	□ Unknown
•			T-1-1 // NI-1	# III No.			044-	Dalation	Walaa	050/ 051
Exposure (Vehicle/Setting) (e.g., pool—waterpark; hot spring; well water)	Total # Exposed (A)	# III Exposed (B)	Total # Not Exposed	# III No Expose	d R	ttack late (%) B/A)	Odds Ratio	Relative Risk	p-Value (provide exact value, if known)	95% Confidence Interval
Attack rate for residents of	f reporting	state:	%	ı	Attack	rate for n	on-resid	lents of repo	orting state:	%
Clinical Specimens - Lab	oratory F	Results (rei	er to the lab	oratory f	findings	s from the	outbreak	investigation)	
1. Were clinical diagnostic sp	ecimens ta	aken from pe	ersons? 🗆 Y	′es □	No (go	o to next ta	<i>b)</i> □U	nknown <i>(go</i> i	o next tab)	
If Yes , from how many	/ persons v	vere specim	ens taken?				_			

Water-General								
Specimen Type*			Specimen Subtype**		Tested for	§ (list all that apply)		
* Specimen Type: 1- Autopsy Specimen (specify subtype), 2-Biopsy (specify), 3-Blood, 4-Bronchial Alveolar Lavage (BAL), 5-Cerebrospinal Fluid (CSF), 6-Conjunctiva/Eye Swab, 7-Ear Swab, 8-Endotracheal Aspirate, 9-Saliva, 10-Serum, 11-Skin Swab, 12-Sputum, 13-Stool, 14-Urine, 15-Vomitus, 16-Wound Swab, 17-Unknown								
** Specimen Subtype: 1-Bladder, 2-Brain, 3-Dura, 4-Hair, 5-Intestine, 6-Kidney, 7-Liver, 8-Lung, 9-Nails, 10-Skin, 11-Stomach, 12-Wound, 13-Other, 14-Unknown								
		, 3-Fungi, 4-Parasites, 5-V						
			for a specific pathogen pe, Total # of People Tes				n/agent and fill	
Clinical Specimen Row Number	Genus/ Chemic	al/ Toxin	Species	Serotype/ Serogrou	ıp/ Serovar	Genotype/ Subtype		
1								
2								
3								
4								
5								
Clinical Specimen Row Number	Confirmed as Etiology ?	Concentration (number)	Unit (e.g., oocysts, CFU)	Unit (e.g., oocysts, CFU) Specimen Type *		Specimen Subtype **		
1	□ yes							
2	□ yes							
3	□ yes							
4	□ yes							
5	□ yes							
Clinical Specimen Row Number	Test Type §					Total # People Tested	Total # People Positive	
1								
2								
3								
4								
5								
* Specimen Type: 1- Autopsy Specimen (specify subtype), 2-Biopsy (specify), 3-Blood, 4-Bronchial Alveolar Lavage (BAL), 5-Cerebrospinal Fluid (CSF), 6-Conjunctiva/Eye Swab, 7-Ear Swab, 8-Endotracheal Aspirate, 9-Saliva, 10-Serum, 11-Skin Swab, 12-Sputum, 13-Stool, 14-Urine, 15-Vomitus, 16-Wound Swab, 17-Unknown								
			(idney, 7-Liver, 8-Lung, 9-Nails, 10-				nago Typing	
6-Chemical Testing, 7-Tis			R, RT-PCR), 3-Microscopy (e.g., flu	orescent, EM), 4-Serologic	ai/immunologica	ı rest (e.g., EIA, ELISA), 5-Pf	iage ryping,	
Isolates		Consissor Burgi	1 (ooiman D	lo 0 / DEGE 1444		
State Lab Isolate II	J	Specimen Profile	3 1 (e.g., PFGE, MLVA, or ge	notype) Sp	ecimen Profil	le 2 (e.g., PFGE, MLVA	, or genotype)	
DC 52.12 Rev. 03 2008			National Outbreak Repo	orting System			CS115923 4	

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Drinking Water Vehicle Description Drinking Water Vehicle Description Water Type* **Public Water** Water Source Water Source Setting of **USUAL Water** Water Treatment (e.g., commercially-bot-System EPA (select ground water, Description Exposure Treatment Provided Subtype tled water, community surface water or (e.g., no treatment. ID Number** (e.g., spring; well; (e.g., airport, (disinfection or filtration: e.g., water system, individual unknown) mobile home disinfection, home boiling; chlorine; rapid sand water system) filtration) filter; reverse osmosis) park) *Water system definitions: Community and noncommunity water systems are public water systems that have ≥ 15 service connections or serve an average of ≥ 25 residents for ≥ 60 days/year. A community water system serves year-round residents of a community, subdivision, or mobile home park. A noncommunity water system serves an institution, industry, camp, park, hotel, or business and can be nontransient or transient. Nontransient systems serve ≥ 25 of the same persons for > 6 months of the year but not year-round (e.g., factories and schools), whereas transient systems provide water to places in which persons do not remain for long periods (e.g., restaurants, highway rest stations, and parks). Individual water systems are small systems not owned or operated by a water utility that have < 15 connections or serve < 25 persons. ** Number used for EPA reporting that uniquely identifies the water system within a specific state. The water system ID number can be found at http://www.epa.gov/safewater/dwinfo/index.html by first selecting a state and then selecting a county. **Drinking Water Quality** Did the drinking water system have any monitoring violations in the 1 month prior to the outbreak? ☐ Yes □ No ☐ Unknown ☐ Not applicable If **Yes**, explain: __ Did the drinking water system have any maximum contaminant level (MCL) violations in the 1 month prior to the outbreak? ☐ Yes □ No ☐ Unknown ☐ Not applicable If **Yes**, explain: _ Did the drinking water system have any violations in the 12 months prior to the outbreak?*** ☐ Yes □ No ☐ Unknown ☐ Not applicable If Yes, explain: ***Sources of information about past violations can be obtained from utility records, consumer confidence reports (water quality reports), or violation records from state or local health departments **Laboratory Section - Drinking Water** Was drinking water tested? \square Yes (specify in table below) \square No □ Unknown Results 2 Sample 5 Source of Sample **Additional Description of Source of Sample** (e.g., kitchen faucet, well, reservoir) Date (mm/dd/yyyy) Number **Volume Tested** Unit Number **Temperature** Unit Residual/Free Disinfectant Level Number (if total and combined disinfectant levels Unit given, total - combined = free) pН Turbidity (NTU)

Water Quality Indicator Sample Number Type (e.g., local coliforms) Concentration (number) Unit (e.g., CFU)	Drinking Water							
Sample Number Type (e.g., fical coliforms) Concentration (number) Unit (e.g., CFU)	Water Quality	/ Indicator						
Microbiology or Chemical/Toxin Analysis (refer to the laboratory findings from the outbreak investigation) Sample Number Genus/ Chemical/ Toxin Species Serolype/ Serogroup/ Serovar Genotype/ Subtype PF6E Pattern Sample Number Test Results Positive? Concentration (number) Unit (e.g., oocysts, CFU) Test Type* Test Method (reference: National Environmental Methods Index: http://www.nemi.gov/) PF6E Pattern				Concentration (number)		Unit (e	a CFU)	
Sample Number Genus/ Chemical/ Toxin Species Serotype/ Serogroup/ Serovar Genotype/ Subtype PFGE Pattern	Campio Hamboi	Type (o.g., room comornie)		Concomitation (nameon)		Omit (o.	9., 0. 0)	
Sample Number Genus/ Chemical/ Toxin Species Serotype/ Serogroup/ Serovar Genotype/ Subtype PFGE Pattern								
Sample Number Genus/ Chemical/ Toxin Species Serotype/ Serogroup/ Serovar Genotype/ Subtype PFGE Pattern								
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Sample Number Genus/ Chemical/ Toxin Species Serotype/ Serogroup/ Serovar Genotype/ Subtype PFGE Pattern								
Sample Number Test Results Positive? Concentration (number) (e.g., cocysts, CFU) Test Type* Test Method freference: National Environmental Mathods Index: Intp://www.nemi.gov) yes	Microbiology	or Chemical/Toxin	Analysis (refe	er to the laboratory findings fro	m the outbreak inves	stigation)	
geg. oocysts, CFU Environmental Methods Index: http://www.nemi.gov http://www.nemi.	Sample Number	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype	PFGE P	attern	
geg. oocysts, CFU Environmental Methods Index: http://www.nemi.gov http://www.nemi.								
geg. oocysts, CFU Environmental Methods Index: http://www.nemi.gov http://www.nemi.								
geg. oocysts, CFU Environmental Methods Index: http://www.nemi.gov http://www.nemi.								
geg. oocysts, CFU Environmental Methods Index: http://www.nemi.gov http://www.nemi.								
yes yes	Sample Number	Test Results Positive?			Test Type*		,	
yes yes			(number)	(e.g., oocysts, CFU)				idex:
yes yes						mup://w	ww.rieriii.gov)	
yes yes		□ voo						
"Test Type: 1-Culturs 2-DNA or RNA Amplification (e.g., PCR, RT-PCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissus Culture Intectivity Assay Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water Did a problem with the source water (i.e., ground water or surface water) contribute to the disease or outbreak? Yes (specify in table below) No Unknown		-						
**Test Type: 1-Culture, 2-DNA or RNA Amplification/Detection (e.g., PCR, RTPCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissue Culture Infectivity Assay Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water Did a problem with the source water (i.e., ground water or surface water) contribute to the disease or outbreak? Yes (specify in table below)		-						
Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contaminated Drinking Water Did a problem with the source water (i.e., ground water or surface water) contribute to the disease or outbreak? Yes (specify in table below)		-						
Did a problem with the source water (i.e., ground water or surface water) contribute to the disease or outbreak? Yes (specify in table below)			ection (e.g., PCR, RT-	PCR), 3-Microscopy (e.g., fluorescent, EM	l), 4-Serological/Immunolog	ical Test (e	.g., EIA, ELISA), 5-Phag	e Typing,
Did a problem with the source water (i.e., ground water or surface water) contribute to the disease or outbreak? Yes (specify in table below)	Factors Cont	tributing to Drinking	Water Cont	amination and/or Increas	ed Exposure to	Contar	minated Drinki	ng Water
Source Water Factors (check all that apply)** Sanitary sewer overflow (SSO)**** Sanitary sewer overflow (SSO)**** Combined sewer overflow (CSO)**** Malfunctioning on-site wastewater treatment system **** Sewage treatment plant malfunction *** Sewer line break *** Poor siting/design of on site wastewater treatment system **** Por siting/design of on site wastewater treatment system **** Por siting/design of on site wastewater treatment system **** Contamination from agricultural chemical application (e.g., fertilizer, pesticides) Contamination from chemical pollution not related to agricultural application Contamination by a chemical that the current treatment methods were not designed to remove Domestic animal contamination - Birds Wildlife contamination - Birds Wildlife contamination - Birds Wildlife contamination - Mammals Wildlife contamination - Hammals Wildlife contamination - Mammals Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Low water table (e.g., drought, over-pumping) Cround water under direct influence of surface water (e.g., shallow well) Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Intentional contamination (explain in remarks) Other, specify:		-			-			ga.o.
Source Water Factors (check all that apply)** Sanitary sewer overflow (SSO) **** Combined sewer overflow (CSO) **** Maifunctioning on-site wastewater treatment system **** ≠ Sewage treatment plant maifunction *** Sewer line break *** Poor siting/design of on site wastewater treatment system **** ≠ Por siting/design of on site wastewater treatment system **** ≠ Nearby biosolid/land application site (e.g., human or animal waste application) Contamination from agricultural chemical application (e.g., fertilizer, pesticides) Contamination by a chemical that the current treatment methods were not designed to remove Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets) Wildlife contamination - Birds Wildlife contamination - Mammals Wildlife contamination - Sish kill Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Low water table (e.g., drought, over-pumping) Ground water under direct influence of surface water (e.g., shallow well)≠ ≠ Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Intentional contamination (explain in remarks)	Did a problem	with the source water	r (i.e., ground	,				
Sanitary sewer overflow (SSO) **** Combined sewer overflow (CSO) **** Malfunctioning on-site wastewater treatment system **** ≠ Sewage treatment plant malfunction *** Sewage treatment plant malfunction *** Sewage treatment plant malfunction *** Poor siting/design of on site wastewater treatment system **** ≠ Por siting/design of on site wastewater treatment system **** ≠ Nearby biosolid/land application site (e.g., human or animal waste application) Contamination from agricultural chemical application (e.g., fertilizer, pesticides) Contamination from chemical pollution not related to agricultural application Contamination by a chemical that the current treatment methods were not designed to remove Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets) Wildlife contamination - Birds Wildlife contamination - Fish kill Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Low water table (e.g., drought, over-pumping) Ground water under direct influence of surface water (e.g., shallow well)≠ ≠ Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Intentional contamination (explain in remarks)				□Yes	s (specify in table be	elow) [□ No □ Unkn	own
Combined sewer overflow (CSO) **** Malfunctioning on-site wastewater treatment system **** # Sewage treatment plant malfunction *** Sewage treatment plant malfunction *** Sewage treatment plant malfunction *** Poor siting/design of on site wastewater treatment system **** # Nearby biosolid/land application site (e.g., human or animal waste application) Contamination from agricultural chemical application (e.g., fertilizer, pesticides) Contamination from chemical pollution not related to agricultural application Contamination by a chemical that the current treatment methods were not designed to remove Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets) Wildlife contamination - Birds Wildlife contamination - Hammals Wildlife contamination - Fish kill Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Low water table (e.g., drought, over-pumping) Ground water under direct influence of surface water (e.g., shallow well)** Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Intentional contamination (explain in remarks)	Source Water Fac	ctors (check all that apply)	**					Suspected***
Malfunctioning on-site wastewater treatment system **** \$ Sewage treatment plant malfunction ***								
Sewage treatment plant malfunction *** Sewer line break *** Poor siting/design of on site wastewater treatment system **** # Nearby biosolid/land application site (e.g., human or animal waste application) Contamination from agricultural chemical application (e.g., fertilizer, pesticides) Contamination from chemical pollution not related to agricultural application Contamination by a chemical that the current treatment methods were not designed to remove Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets) Wildlife contamination - Birds Wildlife contamination - Mammals Wildlife contamination - Fish kill Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Low water table (e.g., drought, over-pumping) Ground water under direct influence of surface water (e.g., shallow well)* # Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Intentional contamination (explain in remarks)							_	
Sewer line break *** Poor siting/design of on site wastewater treatment system **** x Nearby biosolid/land application site (e.g., human or animal waste application) Contamination from agricultural chemical application (e.g., fertilizer, pesticides) Contamination from chemical pollution not related to agricultural application Contamination by a chemical that the current treatment methods were not designed to remove Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets) Wildlife contamination - Birds Wildlife contamination - Fish kill			ent system *****	≠				
Nearby biosolid/land application site (e.g., human or animal waste application)	Sewer line break	***						
Contamination from agricultural chemical application (e.g., fertilizer, pesticides) Contamination from chemical pollution not related to agricultural application Contamination by a chemical that the current treatment methods were not designed to remove Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets) Wildlife contamination - Birds Wildlife contamination - Mammals Wildlife contamination - Fish kill Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Ground water table (e.g., drought, over-pumping) Ground water under direct influence of surface water (e.g., shallow well) Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Other, specify:								
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Domestic animal contamination (e.g., livestock, concentrated feeding operations, pets) Wildlife contamination - Birds Wildlife contamination - Mammals Wildlife contamination - Fish kill Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Low water table (e.g., drought, over-pumping) Ground water under direct influence of surface water (e.g., shallow well)≠ ≠ Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Other, specify:								
Wildlife contamination - Birds Wildlife contamination - Mammals Wildlife contamination - Fish kill Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Low water table (e.g., drought, over-pumping) Ground water under direct influence of surface water (e.g., shallow well)≠ ≠ Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Intentional contamination (explain in remarks) Other, specify:					emove			
Wildlife contamination - Fish kill Flooding/heavy rains Algal bloom Seasonal variation in water quality (e.g., lake/reservoir turnover events, resort community with seasonal loading) Low water table (e.g., drought, over-pumping) Ground water under direct influence of surface water (e.g., shallow well)≠≠ Contamination through limestone or fissured rock (e.g., karst) Contaminated recharge water Use of an alternate source of water by a water utility Mixing of raw water from different sources Improper construction or location of a well or spring Water system intake failure (e.g., cracked well casing, cracked intake pipe) Intentional contamination (explain in remarks) Other, specify:	Wildlife contami	nation - Birds	010011, 0011001111	atou recurry operations, peter				
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Unknown	Other, specify:							
	Unknown							

^{**} Only check off what was found during investigation

^{*** &}quot;Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

^{****}The release of sewage does not have to occur on the property in which persons have become ill. The sewage release may have occurred at a distant site but still affected the property in question.

^{≠ &}quot;On site wastewater treatment system" refers to a system designed to treat and dispose of wastewater at the point of generation, generally on the property where the wastewater is generated (e.g., septic systems or other advanced on site systems). However, contamination that originates from these systems can still occur off the property where treatment and disposal takes place du to migration of contaminants from malfunctioning systems or poor siting and design.

^{≠ ≠} Any water beneath the surface of the ground with substantial occurrence of insects or other macrooganisms, algae, or large-diameter pathogens (e.g., Giardia intestinalis or Cryptosporidium), or substantial and relatively rapid shifts in water characteristics (e.g., turbidity, temperature, conductivity, or pH) that closely correlate with climatologic or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the state.

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Factors Contributing to Drinking Water Contamination and/or Increased Exposure to Contam		ng Water
Did a problem with the water treatment prior to entry into a house or building contribute to the disease \(\subseteq \text{Yes (specify in table below)} \)		Unknown
Treatment Factors (check all that apply)*	Documented/ Observed**	Suspected**
Change in treatment process		
No disinfection Temporary interruption of disinfection		
Chronically inadequate disinfection		
No filtration		
Inadequate filtration		
Deficiencies in other treatment processes Corrosion in or leaching from pipes or storage tanks		
Pipe/component failure or break (e.g., pipes, tanks, valves)		
Contamination during construction or repair of pipes/components		
Construction or repair of pipes/components without evidence of contamination Operator error		
Other, specify:		
Unknown		
Did a problem with the distribution system contribute to the disease or outbreak? Yes (specify in table (NOTE: For a community water system, the distribution system refers to the pipes and storage infrastructure under the prior to the water meter (or property line if the system is not metered). For noncommunity and nonpublic water system the pipes and storage infrastructure prior to entry into a building or house) Distribution and Storage Factors (check all that apply)*	e jurisdiction of th	e water utility
Cross-connection of potable and nonpotable water pipes resulting in backflow	Observed**	
Low pressure or change in water pressure in the distribution system		
Change in water flow direction in the distribution system		
Mixing of treated water from different sources		
Pipe/component failure or break (e.g., pipes, tanks, valves) Corrosion in or leaching from pipes or storage tanks		
Contamination of mains during construction or repair		
Construction or repair of mains without evidence of contamination		
Scheduled flushing of the distribution system Contamination of storage facility		
Aging water distribution components (e.g., pipes, tanks, valves)		
Water temperature ≥30°C (≥86°F)		
Intentional contamination (explain in remarks)		
Other, specify: Unknown		
Did a problem occur after the water meter or outside the jurisdiction of a water utility that contributed to (e.g., in a service line leading to a house/building, in the plumbing inside a house/building, during ship other than in the distribution system, at the point of use, involving commercially-bottled water) □ Yes (specify in table below)	pping/hauling, d	uring storage Unknown
Factors Not Under the Jurisdiction of a Water Utility or Factors at the Point of Use (check all that apply)*	Documented/ Observed**	Suspected**
Legionella species in water system Cross-connection of potable and nonpotable water pipes resulting in backflow		
Lack of backflow prevention in plumbing		
Low pressure or change in water pressure in the plumbing		
Change in water flow direction in the plumbing Corrosion in or leaching from pipes or storage tanks		
Pipe/component failure or break (e.g., pipes, tanks, valves)		
Aging plumbing components (e.g., pipes, tanks, valves)		
Contamination of plumbing during construction or repair Construction or repair of plumbing without evidence of contamination		
Deficiency in building/home-specific water treatment after the water meter or property line		
Deficiency or contamination of equipment/devices using or distributing water		
Contamination during commercial bottling Contamination during shipping, hauling, or storage		
Contamination during snipping, hadning, or storage Contamination at point of use – Tap		
Contamination at point of use – Hose		
Contamination at point of use – Commercially-bottled water Contamination at point of use – Container, bottle, or pitcher		
Contamination at point of use – Contamer, bottle, or pitcher Contamination at point of use – Unknown		
Water temperature ≥30°C (≥86°F)		
Intentional contamination (explain in remarks)		
Other, specify: Unknown		

^{** &}quot;Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

	Drinking Water
Remarks	