

# **National Outbreak Reporting System**

OMB No. 0920-1304

This form is used to report investigations of foodborne and waterborne disease outbreaks; enteric disease outbreaks transmitted by contact with persons, animals, or environmental sources; or by an unknown mode; and certain fungal disease outbreaks. This form has 16 sections, indicated by the dark purple headers. **Please complete as much as possible of all applicable sections.** 

Public reporting burden of this collection of information is estimated to average 20 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC, Project Clearance Officer, 1600 Clifton Road, MS D-24, Atlanta, GA, 30333, ATTN: PRA (0920-1304) <---D0 NOT MAIL CASE REPORTS TO THIS ADDRESS

#### **Guidance document:**

CDC ID (CDC use only)	State ID (	(required)						
Primary Mode of Trans	mission s	elect one (requ	uired)					
<ul> <li>Animal contact</li> <li>Environmental contamination</li> <li>Food</li> </ul>	O Environmental contamination other than food/water O Water							
Dates mm/dd/yyyy								
Date first case became ill (required):       Date last case became ill:       Date of initial exposure:								
Date of last exposure:		Date	of notific	ation to	State/Territory or Lo	ocal/Tribal Health Authoriti	es:	
Date outbreak investigation be	gan:							
Geographic Location								
Exposure state (required): O Exposure occurred in multi O Exposure occurred in a sing Other states: Exposure county (required): O Exposure occurred in multi O Exposure occurred in a sing Other counties: Exposure occurred on any of th Not applicable (N/A) Tribal land (within census the City/Town/Place of exposure (e.	<i>(For multistate</i> <i>(For multistate</i> ple counties in gle county, bu e following: pureau bounda	e exposure or mult n exposure state t some or all cas aries)	eses resid	ded in a c	Utbreaks, enter the ca	e.g., national forest, militar	ry base; specify b	
Primary Cases								
Primary Case Counts								
Primary Case Counts		Number			Sex Number or perc	cent of the primary cases	Number	Percent
Lab-confirmed primary cases			#		Male		#	
Probable primary cases			#		Female		#	
Estimated total primary cases (re	equired)		#		Unknown sex		#	
For food and animal conta	ct outbreak	s, if outbreak	occurr	ed duri	ng >1 calendar y	ear, # cases per year	(by illness on	set)
Case Type	Ye	ear:		Year: _		Year:	Year:	
Lab-confirmed primary cases								
Probable primary cases								

Estimated total primary cases

General

Ago	or percent o	<u> </u>	_	•	Δαο	Nun	abor	Percent	Aac		Number	Percent
Age		#	Percen	t	Age	NUN	nber #	Percent	Age		number #	Percent
<1 year					10-17 years				65-74 yea			
1-4 years		#			18-49 years		#		≥75 years		#	
5-9 years		#			50-64 years		#		Unknown		#	
Signs or Sy	-											
Commonly rej or symptoms	ported sign	s	# cases	;	# cases with info available			<b>symptoms</b> oply from list in Ap	opendix E		# cases	# cases with info available
Vomiting				#	#	Feve	r				#	
Diarrhea				#	#	Othe	r ( <i>specify</i> ):				#	
Bloody stools		İ		#	#						#	
Abdominal cra	amps			#	#						#	
Incubation		•••		select	appropriate units			ion of Illness / hknown duratior	0	d prin	nary cases; selec	t appropriate uni
Incubation Pe	riod	Nu	mber		Increment		lliness	Duration	Number		Incre	ment
Shortest			#	ОMi	ns O Hours O D	ays	Shortes	t		#	OMins OHo	urs O Days
Median			#	ОMi	ns O Hours O D	ays	Median			#	O Mins O Ho	urs ODays
Longest			#	ОMi	ns OHours OD	ays	Longes	t		#	O Mins O Ho	urs O Days
# of cases wi	ith info avai	lable: _			-		# of ca	ses with info av	ailable:			
Healthcare	-Seeking	Behav	<b>iors</b> Amoi	ng prim	ary cases							
Behavior								# cases	4	t cas	es with info av	ailable
Visited health	care provid	er							#			
Visited emerge									#			
Visited Indian	Health Serv	ice or t	ribal facilit	y					#			
Case Outco	omes Amor	g prima	ary cases									
Outcome								# cases	4	t cas	es with info av	ailable
Died									#			
Hospitalized									#			
Hemolytic ure	mic syndroi	ne (HU	S)						#			
Disseminated (e.g., pathogen		blood, ce	entral nervo	us syst	em, bone/joint)				#			
Pregnancy los pregnant wome		es with i	info availabl	e, ente	r number of known				#			
Case Chara	acteristics	Among	g primary ca	ases								
Characteristic During the expo unknown etiolo	osure period				efore illness began fo -patients:	or		# cases	4	‡ cas	es with info av	ailable
Attended or w	- ,.								#			
Nere experier	ncing home	essnes	S				1		#			
Were exposed	in the worl	vplace					1		#			
Were immuno ( <i>e.g., HIV/AIDS,</i>			cell transpla	ant, car	ncer)				#			
					her man (MSM) e/unknown outbreaks	<u> </u>			#			

				General		Lab/Environmental
Travel During the exposure period of i	nterest (or 7 da	ays before illne	ss began for unknown	etiologies)		
<ol> <li>For environmental contaminatio least one night away from the p</li> </ol>			r, and indeterminate	/unknown outbreaks,	did any primary	case-patient travel for at
Domestically?* O Yes Internationally?† O Yes		) Unknown ) Unknown	0 N/A 0 N/A			
2. For food outbreaks, was the out O Yes		ated with the O Unknown	source case-patient	t (e.g., food worker) tr	aveling internati	onally <sup>†</sup> ?
*This includes travel to a different city, st <sup>†</sup> Case-patients with implicated exposure reported through NORS.				e counts for this report. O	only outbreaks with	domestic exposures should be
Case characteristics remarks						
Secondary Cases						
Mode of Secondary Transmissio	<b>n</b> Select all the	at apply		y Case Counts		
Food			Secondary			Number #
<ul> <li>Animal contact</li> <li>Person-to-person</li> <li>Environmental contamination other than food/water</li> </ul>				ned secondary cases econdary cases		#
				total secondary cases		#
Indeterminate/unknown				total cases (Primary +		#
Secondary Case Outcomes Con	nplete for food	and animal co				
Outcome	<u>,</u>		# secondary	cases	# secondar	y cases with info available
Died				#		#
Hospitalized				#		#
Hemolytic uremic syndrome (HUS)				#		#
Laboratory and Environme	ental Inve	stigation				
Sample Collection and Testing	For human sai	mples, only inc	clude primary cases			
1. Were any samples tested?	OYes	ОNo	OUnknown			
2. What types of samples were tes	sted?					
<b>a.</b> Human	O Yes	ОNo	OUnknown	From how many p	ersons (includin	g food workers)?
	⊂) Yes	ОNo	OUnknown			
i. Food worker						
<b>b.</b> Animal	⊖ Yes	O No	OUnknown			
<b>b.</b> Animal <b>c.</b> Food	○ Yes ○ Yes	ONo	OUnknown			
<ul><li>b. Animal</li><li>c. Food</li><li>d. Water</li></ul>	○ Yes ○ Yes ○ Yes	○ No ○ No	○ Unknown ○ Unknown			
<b>b.</b> Animal <b>c.</b> Food	○ Yes ○ Yes ○ Yes ○ Yes	○ No ○ No ○ No	OUnknown	Specify other t	ype(s):	

1

What test types were used? (Select all that apply)					
Human samples         Test for chemicals         Culture         DNA or RNA amplification/detection (e.g., PCR, RT-PCR, multiplex PCR panels)         Mass spectroscopy (e.g., MALDI-TOF)         Metagenomics (e.g., DNAse SISPA, amplicon sequencing, shotgun metagenomics)         Microscopy (e.g., Fluorescent, electron microscope)         Serological or immunological test (e.g., EIA, ELISA, UAT)         Antigen         Antibody         Tissue culture infectivity assay         Other (specify):         Unknown         Did CDC NARMS perform antimicrobial susceptibility testi	<ul> <li>micals</li> <li>Test for chemicals</li> <li>Culture</li> <li>DNA or RNA amplification/detection (e.g., PCR, RT-PCR, multiplex PCR panels)</li> <li>oscopy (e.g., MALDI-TOF)</li> <li>(c.g., DNAse SISPA, amplicon sequencing, agenomics)</li> <li>(e.g., Fluorescent, electron microscope)</li> <li>or immunological test (e.g., EIA, ELISA, UAT)</li> <li>re infectivity assay</li> <li>fy):</li> <li>Other (specify):</li> <li>Unknown</li> </ul>				
	5				
terborne Disease Outbreak Environmental Investi	igation Col	mplete only f	or waterb	orne disease outbreaks	
Did environmental sampling results implicate water as the O Yes O No (skip to b) O Unknown (skip to b)					
<ul> <li>Yes</li> <li>No (<i>skip to b</i>)</li> <li>Unknown (<i>skip to b</i>)</li> <li>a. Did the results implicate the vehicle(s) of transmission</li> <li>Yes</li> <li>No</li> <li>Unknown</li> <li>Please summarize the environmental sampling results that</li> </ul>	at implicate	community ed water in s supporting mental	water sys support c <b>Please</b>	stem, cooling tower) of the epidemiologic findings. <i>(Select all that apply)</i> e <b>describe relevant environmental sampling results</b>	
<ul> <li>Yes</li> <li>No (<i>skip to b</i>)</li> <li>Unknown (<i>skip to b</i>)</li> <li>a. Did the results implicate the vehicle(s) of transmission</li> <li>Yes</li> <li>No</li> <li>Unknown</li> <li>Please summarize the environmental sampling results that</li> </ul>	n? <i>(e.g., pool,</i> at implicate <b>Are there</b> :	community ed water in s supporting mental	water sys support c <b>Please</b>	stem, cooling tower) of the epidemiologic findings. (Select all that apply)	
<ul> <li>Yes</li> <li>No (skip to b)</li> <li>Unknown (skip to b)</li> <li>a. Did the results implicate the vehicle(s) of transmission</li> <li>Yes</li> <li>No</li> <li>Unknown</li> <li>Please summarize the environmental sampling results the</li> <li>Environmental sampling results</li> <li>Fecal indicators</li> </ul>	at implicate Are there sampling O Yes	community ed water in s supporting imental g results?	water sys support c <b>Please</b>	stem, cooling tower) of the epidemiologic findings. <i>(Select all that apply)</i> e <b>describe relevant environmental sampling results</b>	
<ul> <li>Yes</li> <li>No (<i>skip to b</i>)</li> <li>Unknown (<i>skip to b</i>)</li> <li>a. Did the results implicate the vehicle(s) of transmission</li> <li>Yes</li> <li>No</li> <li>Unknown</li> <li>Please summarize the environmental sampling results that</li> <li>Environmental sampling results</li> <li>Fecal indicators</li> <li>pH</li> </ul>	at implicate Are there enviror sampling O Yes O Yes	community ed water in s supporting mental g results? O No O No	water sys support c <b>Please</b>	stem, cooling tower) of the epidemiologic findings. <i>(Select all that apply)</i> e <b>describe relevant environmental sampling results</b>	
<ul> <li>Yes</li> <li>No (skip to b)</li> <li>Unknown (skip to b)</li> <li>a. Did the results implicate the vehicle(s) of transmission</li> <li>Yes</li> <li>No</li> <li>Unknown</li> <li>Please summarize the environmental sampling results that</li> <li>Environmental sampling results</li> <li>Fecal indicators</li> <li>pH</li> <li>Temperature</li> </ul>	at implicate Are there sampling Yes Yes	community ed water in s supporting mental presults? O No O No O No	water sys support c <b>Please</b>	stem, cooling tower) of the epidemiologic findings. <i>(Select all that apply)</i> e <b>describe relevant environmental sampling results</b>	
<ul> <li>Yes</li> <li>No (<i>skip to b</i>)</li> <li>Unknown (<i>skip to b</i>)</li> <li>a. Did the results implicate the vehicle(s) of transmission</li> <li>Yes</li> <li>No</li> <li>Unknown</li> <li>Please summarize the environmental sampling results that</li> <li>Environmental sampling results</li> <li>Fecal indicators</li> <li>pH</li> <li>Temperature</li> <li>Turbidity</li> </ul>	at implicate Are there s enviror sampling O Yes O Yes O Yes O Yes	community ed water in s supporting mental g results? O No O No O No O No	water sys support c <b>Please</b>	stem, cooling tower) of the epidemiologic findings. <i>(Select all that apply)</i> e <b>describe relevant environmental sampling results</b>	
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<ul> <li>Yes</li> <li>No (<i>skip to b</i>)</li> <li>Unknown (<i>skip to b</i>)</li> <li>a. Did the results implicate the vehicle(s) of transmission</li> <li>Yes</li> <li>No</li> <li>Unknown</li> <li>Please summarize the environmental sampling results that</li> <li>Environmental sampling results</li> <li>Fecal indicators</li> <li>pH</li> <li>Temperature</li> <li>Turbidity</li> <li>Residual/free disinfectant</li> <li>Combined disinfectant</li> <li>Etiologic agent(s)</li> </ul>	at implicate Are there senviror sampling O Yes O Yes	community ed water in s supporting mental g results? No No No No No No No No No No No	water sys support c Please (e.g., f	stem, cooling tower) of the epidemiologic findings. (Select all that apply) e describe relevant environmental sampling results fecal indicators identified in well water on [insert date].)	

		0	es on confirming	_	0,			etabolic profile			
Genus	Spec		Subtype (e.g., serotyp genotype)	De,	Othe character	r	_	# positive primary of	cases	Detected in*	Outbreak etiology confirmed or suspected
							# cul	#: ture-confirmed: )T-positive only:			
							# cult	#: ture-confirmed: )T-positive only:			
*Detected in <i>(select</i>	all that apply): 1 –	patient spe	cimen; 2 – food san	nple; 3 ·	– environmental	l sample; 4 -	- food v	worker specimen; 5 – wa	ater sam	ple; 6 – anima	l specimen
						1	r isolat	tes/strains, enter all av	-		
<b>CDC system</b> (PulseNet, CaliciNet, CryptoNet, Other, Unknown, None)	State lab: sample ID	<b>sa</b> (e. ke	DC lab: mple ID g., PulseNet y, CaliciNet key, yptoNet key)	(e.g., outbr Calici numb	lab: reak ID PulseNet eak code, iNet outbreak iner, CryptoNet ieak number)	PFGE pattern		Sequencing information (e.g., allele code, sequenced region)		<b>nation</b> serotype,	Source/ sample type (e.g., environmental sample; refer to list in Appendix E)
						Enzyme Enzyme					
						Enzyme	1:				
						Enzyme	2:				
Settings											
• • • •	-		•			•		Person-to-Person,			
could describe a	a single outbrea	k setting,	choose the optic	on that	t best applies	and prov	de de	res occurred in multi tails in the remarks captured in the next	box be	low. For food	iple options Iborne disease
Setting 1/Majo	r Setting	Se	etting 2		Setting	3		Setting 4		Ot	her (specify):
Setting of exp	osure remarks:										

A ....

	Setting 2	Setti	ng 3	Setting 4	Other (specify):
Setting of preparation r	remarks:				
etting(s) of Exposur	e and Implicated Veh	icle Description: Wat	er Complete only for water	outbreaks	
mplicated type(s) of wate	er exposure Select all that app	ly and complete appropriate wat	er exposure sections		
<ul> <li>exposure pathway (i.</li> <li>Other exposures to w display; includes water</li> <li>Undetermined expos</li> </ul>	.e., not limited to ingestion) vater, including other env r consumed from sources su	rironmental exposures to uch as back-country stream ended purpose or use of the	tem, private well, commerci water (e.g., cooling/industr s) water is unknown or the wa	ial, water reuse, irrigation, c	occupational, decorative/
		-	(TREATED WATER		(TREATED WATER
Water venue (e.g., spa/whirlpool/ hot tub; refer to list in Appendix E)	Water venue subtype (Refer to list in Appendix E)	Setting of exposure (e.g., hotel/motel; refer to list in Appendix E)	(TREATED WATER OUTBREAKS ONLY) How was the water in the venue treated? (e.g., disinfection, filtration)	(TREATED WATER OUTBREAKS ONLY) <b>Treatment description</b> (e.g., chlorine) Select all that apply from list in Appendix E	OUTBREAKS ONLY) What were chlorine stabilizer levels at th
(e.g., spa/whirlpool/ hot tub; refer to list in	(Refer to list in	(e.g., hotel/motel; refer	OUTBREAKS ONLY) How was the water in the venue treated? (e.g., disinfection,	OUTBREAKS ONLY) Treatment description (e.g., chlorine) Select all that apply from	OUTBREAKS ONLY)
(e.g., spa/whirlpool/ hot tub; refer to list in	(Refer to list in	(e.g., hotel/motel; refer	OUTBREAKS ONLY) How was the water in the venue treated? (e.g., disinfection,	OUTBREAKS ONLY) Treatment description (e.g., chlorine) Select all that apply from	OUTBREAKS ONLY) What were chlorine stabilizer levels at th
(e.g., spa/whirlpool/ hot tub; refer to list in	(Refer to list in	(e.g., hotel/motel; refer	OUTBREAKS ONLY) How was the water in the venue treated? (e.g., disinfection,	OUTBREAKS ONLY) Treatment description (e.g., chlorine) Select all that apply from	OUTBREAKS ONLY) What were chlorine stabilizer levels at th
(e.g., spa/whirlpool/ hot tub; refer to list in Appendix E)	(Refer to list in	(e.g., hotel/motel; refer to list in Appendix E)	OUTBREAKS ONLY) How was the water in the venue treated? (e.g., disinfection,	OUTBREAKS ONLY) Treatment description (e.g., chlorine) Select all that apply from	OUTBREAKS ONLY) What were chlorine stabilizer levels at th

Setting(s) of Preparation: Food Complete only for food outbreaks

	Water system* (e.g., community water system; refer to list in Appendix E)	Public water system EPA ID number <sup>†</sup>	Water source (e.g., ground water, surface water; refer to list in Appendix E)	Water source description (e.g., spring, well, lake; refer to list in Appendix E)	How was the water in the system treated? (e.g., disinfection, filtration)	<b>Treatment</b> <b>description</b> ( e.g., chlorine) Select all that apply from list in Appendix E	Setting of exposure (e.g., hotel/motel; refer to list in Appendix E)
Ī							
L							

\* Water system definitions: Community and non-community 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 non-community water system serves an institution, industry, camp, park, hotel, or business and can be non-transient or transient. Non-transient 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. <sup>†</sup> Number used for EPA reporting that uniquely identifies the public water system within a specific state. The water system ID number can be found by searching the Safe Drinking Water Information System (SDWIS) online at <u>https://ofmpub.epa.gov/apex/sfdw/f?p=108:200</u>.

Implicated water — other and undetern	nined exposure to water description		
System or source of the water (e.g., cooling tower; refer to list in Appendix E)	<b>Setting of exposure</b> (e.g., hotel/motel; refer to list in Appendix E)	(OTHER AND ENVIRONMENTAL EXPOSURES TO WATER OUTBREAKS ONLY) Was the water system/source treated to reduce or prevent the risk of disease transmission?	(OTHER AND ENVIRONMENTAL EXPOSURES TO WATER OUTBREAKS ONLY) If yes, how was the water in the system/source treated?
Water setting of exposure remarks			
Associated Events Refer to list in A	opendix E		
Was exposure associated with a s	pecific event(s) or gathering(s)?	O Yes (specify):	ONo OUnknown
Long-term Care Outbreaks Comp	lete this section only if "Long-term car	e/nursing home/assisted living facility" is	selected as a setting above
Types of care affected (Select all that         Nursing home/skilled nursing         Assisted living         Independent living (in continuous of         Intermediate care         Memory care         Other (specify):			
School Outbreaks Complete this se	ction only if "School/College/University"	' is selected as a setting above	
<ol> <li>Did the outbreak involve one or n O One O More than one of</li> <li>Grades affected <i>(Select all that application)</i></li> </ol>	number of schools:)	DUnknown	
<ul> <li>K 1 2</li> <li>College/university/technical scho</li> <li>Unknown or undetermined grade</li> <li>Number of schools with public or Public: Private:</li> </ul>	level(s) private funding <i>(If a single school wa</i>	■ 6 ■ 7 ■ 8 ■ 9 as involved, write "1" next to the funding ty nined:	□10 □11 □12 ype):
		only if "Correctional/Detention Facility" is	selected as a setting above
			-
<ul> <li>2. Is the facility run by the governm O Government</li> <li>O Private</li> </ul>	-		
O State prison O	Juvenile detention center Immigration detention center Unknown	O Other <i>(specify):</i>	
Complete for foodborne disease ou	tbreaks only:		
4. Who is involved in food preparati	-		
Inmate food workers OYes Other food workers OYes	O No     O Unknown       O No     O Unknown		
		answer yes in the Food Contributing F n the food contributing factors section)	actors section), were any of the
Inmate food workersO YesOther food workersO Yes	ONo OUnknown ONo OUnknown		

**Animal Contact** 

Attack Rates Complete for person-te	o-person,	environmental contamination, an	d indeter	minate/unknow	n outbreaks that o	ccurred in a single setting only	
Group		Estimated # exposed*		Estima	ated # ill	Crude attack rate [(estimated # ill / estimated # exposed) x 100]	
Residents, guests, attendees, patients	s, etc.		#		:	#	
Staff, crew, etc.			#		:	#	
*e.g., number of persons who attended, or w	ere reside	nts in nursing home, or were on affe	cted ward	1			
Animal Contact Section co	omplete	for animal contact outbreak	s				
Animal vehicle undetermined?	OYes	s ONo					
If animal vehicle undetermined, reason(s) supporting animal contact as the mode of transmission (Select all that apply)         Epidemiologic evidence       Environmental evidence       Other (specify):         Laboratory evidence       Traceback investigation       Other (specify):							
Question		Animal Vehicle 1		Animal Vel	nicle 2	Animal Vehicle 3	
Animal type							
Vehicle confirmed or suspected							
Reason(s) confirmed or suspected Enter all from list in Appendix E							
Animal(s) experienced diarrhea or illness that could be related to outbreak illnesses?	O Yes	s ONo OUnknown	O Ye	s ONo	OUnknown	⊖Yes ⊖No ⊖Unknown	
Animal(s) imported to U.S.?	ed to U.S.? O Yes, country: O Yes, country unknown O No O Unknown		<ul> <li>Yes, country:</li> <li>Yes, country unknown</li> <li>No</li> <li>Unknown</li> </ul>			<ul> <li>Yes, country:</li> <li>Yes, country unknown</li> <li>No</li> <li>Unknown</li> </ul>	
Did the animal(s) implicated in the outbreak meet any of the following criteria? (Select all that apply)	or Co Pet Into Wil	ckyard/residential livestock poultry mmercial livestock or poultry c/companion animal eractive exhibit animal d animal/wild game her <i>(specify)</i> :	or Co Pe Int Wi	poultry	it animal	<ul> <li>Backyard/residential livestock or poultry</li> <li>Commercial livestock or poultry</li> <li>Pet/companion animal</li> <li>Interactive exhibit animal</li> <li>Wild animal/wild game</li> <li>Other (specify):</li> </ul>	
	🗆 Un	known	🗅 Un	known		□ Unknown	
<ol> <li>How many animals were involve a. How many animals died duri</li> </ol>	ng the o	utbreak period of interest?	#	or 🗆 Unkn			
<b>b.</b> How many animal deaths we	ere presu	imed to be the result of outbre	ak-asso	clated illness	′# Or		
2. Was the animal's living environn	nent imp	licated as a source of the outb	reak?	O Yes	ON0 OUni	known	
<ul> <li>3. If any outbreak-associated case-patients were exposed in the workplace, specify the occupation(s) of primary cases exposed in the workplace (Select all that apply)</li> <li>Farm/dairy worker</li> <li>Pet store worker</li> <li>Agricultural store worker (e.g., farm/rural supply store)</li> <li>Processing plant/slaughterhouse worker</li> </ul>							
Other <i>(specify)</i> :							
<ul> <li>4. Was pet food or animal feed imp If yes, specify:</li> <li>Prepackaged pet food</li> </ul>	olicated a	as a source? O Yes O I		O Unknown w" pet food	$\Box$ Other (s	pecify):	
<ul> <li>Homemade pet food</li> <li>Homemade pet food</li> <li>Frozen or fresh feeder roder</li> <li>Pet treats or chews</li> </ul>	nts or ch	Feed (e.g., livestock)					

	Animal Co	ontact	Fungal			
5. Was the "Compendium of Measures to Pr OYes ONo OUnknown	event Disease Associated with Animals in Public Setting	gs" used during th	ne investigation?			
Animal Contact Remarks						
Fungal Disease Outbreaks Comple	te for blastomycosis, coccidioidomycosis, histoplas	smosis. and spor	rotrichosis outbreaks			
Treatments						
Treatment		# Cases	# Cases with info available			
Treated with systemic antibacterial medicatio	n before fungal infection was diagnosed (e.g., oral, IV)	#	#			
Treated with systemic antifungal medication (	(e.g., oral, IV)	#	# #			
Environmental Sampling Environmental samples collected? O Yes <u>Results:</u>	O No O Unknown					
Contributing Factors Select all that apply						
<ul> <li>Demolition, construction, or renovation</li> <li>Disruption of bat droppings</li> <li>Disruption of bird droppings</li> <li>Disruption of plant matter</li> <li>Disruption of soil</li> </ul>	<ul> <li>Natural disaster or phenomenon (e.g., earthquake, dust storm) (specify):</li></ul>					
Occupational Exposures						
Specify major industry/industries* (employer's type of business, e.g., hospital, elementary school, clothing manufacturing, restaurant): *Resources for industry and occupation coding are available at: https://www.cdc.gov/niosh/topics/coding/collecting.html Personal Protective Equipment (PPE)						
PPE use		# Cases	# Cases with info available			
Wore PPE at any time during the suspected ex	xposure	#	#			
Specify type(s) of PPE:						

# Food Section Complete for food outbreaks

O Yes O No

## If food vehicle undetermined, reason(s) supporting foodborne as the mode of transmission (Select all that apply)

Epidemiologic evidence
 Laboratory evidence

vidence 🛛 🗆 O

Environmental evidence

Food vehicle undetermined?

Traceback investigation
 Other *(specify)*:

) Yes, country: ) Yes, country unknown ) No ) Unknown	<ul> <li>Yes, country:</li> <li>Yes, country unknown</li> <li>No</li> <li>Unknown</li> </ul>	<ul> <li>Yes, country:</li> <li>Yes, country unknown</li> <li>No</li> <li>Unknown</li> </ul>				
) Yes, federal ) Yes, state only ) No ) Unknown	<ul> <li>Yes, federal</li> <li>Yes, state only</li> <li>No</li> <li>Unknown</li> </ul>	<ul> <li>Yes, federal</li> <li>Yes, state only</li> <li>No</li> <li>Unknown</li> </ul>				
) Yes, federal Yes, state only No Unknown	<ul> <li>Yes, federal</li> <li>Yes, state only</li> <li>No</li> <li>Unknown</li> </ul>	<ul> <li>Yes, federal</li> <li>Yes, state only</li> <li>No</li> <li>Unknown</li> </ul>				
Does the location of preparation have a certified food protection manager?       O Yes       O No       O Unknown						
	Yes, country unknown No Unknown Yes, federal Yes, state only No Unknown Yes, federal Yes, state only No Unknown	Yes, country unknown No Unknown Yes, federal Yes, state only No Unknown Yes, federal Yes, federal Yes, state only No Unknown Yes, federal Yes, state only No Unknown O Unknown O Unknown				

	s, select C9, C10, or C11 below		
Food C	contributing Factors Select all that contributed to this outbreak		
Point o Before • Pre- • Post • Unk <u>Contam</u> If no col	ect if contributing factors unknown f final preparation/sale (POS): restaurant, grocery store, private ho point of final preparation/sale: Harvest: farm or dairy, harvest area, growing field t-Harvest: processing or pasteurization plant, distribution or storage nown if pre or post-harvest: occurred before point of final prep/sale, hination Factors: ntamination factor available to enter, please select reason:	facility, during transit but point unknown	
Factor	A (does not apply to etiologic agent) O Unknown O None Factor	e identified	Source(s)
C1	Toxin or chemical agent naturally part of tissue in food (e.g., ciguatera, scombroid, mushroom poisoning)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	<ul> <li>Before POS; Pre-Harvest</li> <li>Before POS; Unknown Pre- or Post-Harvest</li> </ul>
C2	Poisonous substance or infectious agent intentionally added to food to cause illness (does not include injury)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest
C3	Poisonous substance accidentally/inadvertently added to food (e.g., cleaning compound or metallic ingredients accidentally added to food)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest
C4	Ingredients toxic in large amounts accidentally added to food (e.g., niacin poisoning in bread, nitrites in cured meat)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS;Unknown Pre- or Post-Harvest
C5	□ Container or equipment used to hold or convey food was made with toxic substances (e.g., galvanized container used to store acidic food/beverage, flour stored in container that previously held toxic materials)	<ul> <li>Point of Final Prep/Sale</li> <li>Before POS; Post-Harvest</li> <li>Unknown location</li> </ul>	<ul> <li>Before POS; Pre-Harvest</li> <li>Before POS; Unknown Pre- or Post-Harvest</li> </ul>
C6	□ Food contaminated by animal or environmental source <b>at point of</b> <b>final preparation/sale</b> (restaurant, private home, grocery store, etc.) (e.g., mouse feces in pantry, leaking roof in restaurant)	□Point of Final Prep/Sale	
C7	□ Food contaminated by animal or environmental source <b>before</b> arriving at point of final preparation (pre or post-harvest) (e.g., shellfish from polluted waters, crops contaminated by irrigation water, Salmonella in eggs, peanut butter in processing plant)	Before POS; Pre-Harvest Before POS; Post-Harvest	Before POS; Unknown Pre- or Post-Harvest
C8	Cross-contamination of foods, excluding infectious food workers/ handlers (e.g., contamination of vehicle via contaminated surface, food, or fomites including, but not limited to, worker's hand, cutting board, preparation table, utensils, processing line)	<ul> <li>Point of Final Prep/Sale</li> <li>Before POS; Post-Harvest</li> <li>Unknown location</li> </ul>	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest
C9	Contamination from infectious food worker/handler through bare-hand contact with food	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest
C10	Contamination from infectious food worker/handler through gloved-hand contact with food	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest
C11	Contamination from infectious food worker/handler through unknown type of hand contact with food or indirect contact with food (e.g., contact with utensils in food)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest
C12	Contamination from infectious <b>non-food worker/handler</b> through direct or indirect contact with food <i>(e.g., contact with utensils in food)</i>	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest
C13	Other source of contamination ( <i>specify</i> ):	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest

Was an infectious food worker implicated as the source of contamination?

Food

OUnknown

 $\operatorname{O}\operatorname{Yes}$ 

 $\mathrm{O}\,\mathrm{No}$ 

## Food

## Proliferation Factors: Bacterial and fungal outbreaks only

If no proliferation factor available to enter, select reason: ON/A (does not apply to etiologic agent) OUnknown

O None identified

Factor code	Factor		Source(s)	
P1	Allowing foods to remain out of temperature control for a prolonged period of time <b>during preparation</b> (e.g., lengthy preparation time, allowing frozen foods to thaw at room temperature)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest	
P2	Allowing foods to remain out of temperature control for a prolonged period of time during food service or display (e.g., during buffet line)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest	
P3	Inadequate cold holding temperature due to malfunctioning refrigeration equipment	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest	
P4	Inadequate cold holding temperature due to an improper practice (e.g., overloaded refrigerator/cooler, storing food above fill line)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
Р5	Inadequate hot holding temperature due to malfunctioning equipment	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harvest	
P6	Inadequate hot holding temperature due to an improper practice (e.g., steam table not turned on, overloaded hot holder/crockpot used to heat or reheat food)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
P7	Improper cooling of food (e.g., food refrigerated in large quantities during cooling process)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
P8	Extended refrigeration of food for an unsafe amount of time, relative to the food product and pathogen (e.g., Listeria growth after refrigeration of deli meat for more than 7 days)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
Р9	Inadequate Reduced Oxygen Packaging (ROP) of food (e.g., vacuum-packed fish, salad in gas-flushed bag, garlic packaged in oil)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
P10	Inadequate non-temperature dependent processes (e.g., acidification, water activity, fermentation) applied to a food to prevent pathogens from multiplying	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
P11	Other situations that promoted or allowed microbial growth or toxic production (specify):	Point of Final Prep/Sale       Before POS; Pre-Harvest         Before POS; Post-Harvest       Before POS; Unknown Pre- or Post-Harvest         Unknown location       Before POS; Unknown Pre- or Post-Harvest		
If no sur O N/A (c <b>Factor</b>	I Factors: Bacterial, viral, parasitic, and fungal outbreaks only vival factor available to enter, select reason: does not apply to etiologic agent) O Unknown O None Factor	identified	Source(s)	
code S1	Inadequate time and temperature control during initial cooking/ thermal processing of food (e.g., inadequate pasteurization of milk, inadequate cooking of meats/poultry prior to service)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
S2	Inadequate time and temperature control during reheating of food (e.g., insufficient reheating of sauces)	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
S3	Inadequate time and temperature control during freezing of food designed for pathogen destruction	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	
<b>S</b> 4	Inadequate non-temperature dependent processes (e.g., acidification, water activity, fermentation) applied to food to prevent pathogen from surviving	Point of Final Prep/Sale     Before POS; Post-Harvest     Unknown location	Before POS; Pre-Harvest Before POS; Unknown Pre- or Post-Harves	

Food

Water

Factor		Factor			Source(s)	
code						
S5	□ No attempt was r cooking/thermal	made to inactivate the contaminant through initial processing, freezing, or chemical processes		<ul> <li>Point of Final Prep/Sale</li> <li>Before POS; Post-Harvest</li> <li>Unknown location</li> <li>Before POS; Unknown</li> </ul>		-Harvest known Pre- or Post-Harvest
S6	S6 Other process failures that permit pathog		en survival ( <i>specify</i> ):	<ul> <li>Point of Final Prep/Sale</li> <li>Before POS; Post-Harvest</li> <li>Unknown location</li> </ul>	Before POS; Pre Before POS; Un	-Harvest known Pre- or Post-Harvest
Food C	ontributing Factors	Remarks:		•		
Tracel	back & Recall d	Complete only for fod	od and animal contact of	utbreaks		
		Include all traceback po Is regarding the implicate		e contamination of the implicated	d vehicle or helped ar	nplify or spread
	ck point(s)	<u> </u>	1	2		3
	ny name					
(e.g., res	<b>ny type</b> Description of taurant, retailer, farm, l or, manufacturer, proce	breeder, supplier/				
Country	1					
State						
	<b>ack findings</b> I that apply from list in	Appendix E				
What fee	deral agencies were □FDA □USDA		ack investigation? <i>(Select &amp; Signal Select &amp; Signal Selectly)</i> :	all that apply)		None
Recall						
	d product was recalle	ed				
Exa	ct item(s) recalled:					
Link	k to official recall an	inouncement(s):				
Comme	nts:					
	Section Comple	te for water outbrea	ks			
Water		te for water outbrea	ks			_
Water Suppor	ting evidence			#	_	
Water Suppor 1. Estir 2. Wha	<b>ting evidence</b> mated total number o at evidence implicate	of persons with prima ed the water exposure(	ry water exposure: (s)? <i>(Select all that apply)</i>		Prior experience ma	kes this a likely source
Water Suppor 1. Estir 2. Wha □ Ep	rting evidence mated total number o at evidence implicate pidemiologic data	of persons with primar ed the water exposure( □ Clinical labora	ry water exposure: (s)? <i>(Select all that apply)</i> atory data	nmental health data 🛛 🗅 F		kes this a likely source
Water Suppor 1. Estir 2. Wha □Ep 3. Were	ting evidence mated total number of at evidence implicate pidemiologic data e data collected to ea	of persons with prima ed the water exposure( Clinical labora stimate association <i>(e</i> .	ry water exposure: (s)? <i>(Select all that apply)</i> atory data	nmental health data 📮 🖬 s ONo OUnknov	vn	
Water Suppor 1. Estin 2. Wha Ep 3. Were a. H	<b>ting evidence</b> mated total number of at evidence implicate pidemiologic data e data collected to ea f <b>no or unknown,</b> w	of persons with primar ed the water exposure(	ry water exposure: (s)? ( <i>Select all that apply)</i> atory data	nmental health data s ONo OUnknov s who were ill? OYes		
Water Suppor 1. Estir 2. Wha DEp 3. Werd a. If b. If	ting evidence mated total number of at evidence implicate bidemiologic data e data collected to e f no or unknown, w f yes, please provide	of persons with prima ed the water exposure(	ry water exposure: (s)? ( <i>Select all that apply</i> ) atory data	nmental health data s ONo OUnknov s who were ill? OYes er exposure:	vn ONo OUnki	nown
Water Suppor 1. Estir 2. Wha DEp 3. Werd a. If b. If	<b>ting evidence</b> mated total number of at evidence implicate pidemiologic data e data collected to ea f <b>no or unknown,</b> w	of persons with primar ed the water exposure(	ry water exposure: (s)? ( <i>Select all that apply)</i> atory data	nmental health data s ONo OUnknov s who were ill? OYes	vn	
Water Suppor 1. Estin 2. Wha DEp 3. Were a. If b. If	ting evidence mated total number of at evidence implicate bidemiologic data e data collected to e f no or unknown, w f yes, please provide	of persons with primar ed the water exposure(	ry water exposure: (s)? ( <i>Select all that apply</i> ) atory data	nmental health data s ONo OUnknow s who were ill? OYes ter exposure: Type of effect measure (e.g., odds ratio,	vn ONo OUnki	nown 95% confidence

	Legionella Rec Water
Water Remarks	
Legionella and Other Biofilm-Associated Pathogens	
Additional questions for biofilm-associated pathogens	
1. Did the outbreak occur in a facility with any of the following char	
<ul> <li>"Green" components (e.g., low-flow engineering)</li> <li>Construction in building within the last six months</li> <li>Construction nearby within the last six months</li> </ul>	<ul> <li>Supplemental building disinfection system</li> <li>Centralized hot water system</li> <li>Other (specify):</li></ul>
Facility characteristic remarks:	
2. Did the facility have a water management program in place before	re the outbreak? O Yes O No O Unknown
<ul> <li>a. If yes, which of these elements did the program include: (Sele</li> <li>Multi-disciplinary water management program team</li> <li>Diagram of the building's water system</li> <li>Identification of control points/locations (e.g., areas of potential Legionella growth and spread)</li> <li>Established control limits</li> <li>Regular water parameter testing (e.g., disinfectant, temperatus)</li> <li>Plan for implementing corrective action (tasks taken when markales are outside of control limits)</li> </ul>	<ul> <li>Method of plan verification         <ul> <li>(e.g., pathogen testing, clinical surveillance)</li> <li>Documentation of water management program             performance and activities</li> <li>Unknown</li> <li>inter, pH)</li> </ul> </li> </ul>
<b>b.</b> If <b>yes</b> , who designed the water management program: <i>(Select</i>	all that apply)
<ul> <li>Facility</li> <li>Other (specify</li> <li>Outside contractor</li> <li>Unknown</li> <li>Public health department</li> </ul>	<i>)</i> :
<b>3.</b> Were recommendations provided to the facility to decrease the ri O Yes O No O Unknown O Not applicable	sk of Legionella or other biofilm-associated pathogen exposure?
a. If <b>yes</b> , please select all that apply:	
<ul> <li>Flushing potable water system</li> <li>Superheat potable water system</li> <li>Implement secondary potable water disinfection system</li> <li>Implement point of use filter(s)</li> <li>Hyperchlorination of potable water system</li> <li>Hyperchlorination of recreational water system</li> <li>Low level chlorination of potable water system</li> </ul>	<ul> <li>Water restrictions         <ul> <li>(e.g., discontinuing use of showers, faucets, or other water uses)</li> </ul> </li> <li>Closure of an associated device (e.g., shutdown of a fountain, hot tub)</li> <li>Other (specify):</li> </ul>
<b>4.</b> Were samples tested for <i>Legionella</i> at a laboratory participating in O Yes O No O Unknown O Not applicable	a national proficiency program (e.g., ELITE, ELAP, AIHA)?
Biofilm-associated pathogen remarks	
Recreational Water — Treated Venue	
Water quality management — treated recreational water	
1. Was water venue(s) inspected in the 6 months before the outbreak?	OYes ONo OUnknown ONot applicable
[NOTE: If yes, at	ttach inspection report(s)]

Rec Water

**Treated recreational water remarks** 

Factor	Recreational water (treated venue) contributing factors Select all that apply*	Documented/observed	or Suspected	
Unknown	Contributing factors are unknown	N/A		
People	Maximum bather load exceeded	O Documented/observed	OSuspected	
	□ Water venue(s) primarily used by children ages <5 years	O Documented/observed	OSuspected	
	General/vomit incident in water	O Documented/observed	OSuspected	
	Patrons or staff entered the water when ill with diarrhea	O Documented/observed	OSuspected	
Facility Design	Hygiene facilities (e.g., toilets, diaper-changing stations) inadequate or distant from water venue(s)	O Documented/observed	O Suspected	
	Cross connection with other water venue(s) or with wastewater/ non-potable water	O Documented/observed	OSuspected	
	Ventilation insufficient in indoor aquatic facility	O Documented/observed	OSuspected	
	New construction or alteration of water venue or indoor facility	O Documented/observed	OSuspected	
Maintenance	Chemical feed continues when no or low water in recirculation system	O Documented/observed	OSuspected	
	Disinfection (e.g., chlorine, bromine) inadequate or absent	O Documented/observed	OSuspected	
	Disinfection (e.g., chlorine, bromine) excessive	O Documented/observed	OSuspected	
	□ Chloramine concentration >0.4 ppm	O Documented/observed	OSuspected	
	Giltration system malfunctioning or inadequate	O Documented/observed	OSuspected	
	Recirculation pump off or restarted with swimmers in water	O Documented/observed	OSuspected	
	□ No regular scrubbing to remove slime/biofilm	O Documented/observed	OSuspected	
	□ No regular hot tub/spa draining	O Documented/observed	OSuspected	
	□ Stagnant water in hot tub/spa piping	O Documented/observed	OSuspected	
Policy and	No qualified operator <sup>s</sup> on payroll or under contract	O Documented/observed	OSuspected	
management	$\Box$ No qualified operator ${}^{\!\!8}$ or responsible supervisor ${}^{\!9}$ on duty during outbreak	O Documented/observed	OSuspected	
	General Water quality monitoring (e.g., test kit, testing frequency) inadequate or absent	O Documented/observed	OSuspected	
	Record keeping (e.g., water quality testing results, fecal incident response) inadequate or absent	O Documented/observed	O Suspected	
	Employee illness policies not enforced or absent	O Documented/observed	OSuspected	
	□ Water venue(s) not regulated as recreational water venue(s) (e.g., does not meet state/local definition)	O Documented/observed	OSuspected	

\*Only select what was found during investigation.

<sup>++</sup>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.

<sup>§</sup>A qualified operator is defined as someone who has completed training approved by appropriate state/local officials.

<sup>1</sup>A responsible supervisor is defined as someone who conducts and records results of water quality testing, properly maintains water quality, performs general maintenance procedures, and identifies when to close venues to protect public health without a full-time onsite qualified operator.

#### Other contributing factors

#### **Recreational Water — Untreated Venue**

## Water quality management — untreated recreational water

**1.** Did the venue meet recreational water quality standards (*e.g., applicable local, state, or Environmental Protection Agency [EPA] criteria*) at the time of the outbreak?

O Yes O No O Unknown O Not applicable

2. Do you have microbiological water quality testing results collected in the 3 months before the outbreak?

OYes ONo OUnknown

[NOTE: If yes, please attach results]

#### Untreated recreational water remarks

Factor	<b>Recreational water (untreated venue) contributing factors</b> Select all that apply*	Documented/observed or Suspec		
Unknown	Contributing factors are unknown	N/A		
People	Maximum bather load exceeded	O Documented/observed	OSuspected	
	□ Water venue(s) primarily used by children ages <5 years	O Documented/observed	OSuspected	
	General Fecal/vomit incident in water	O Documented/observed	OSuspected	
	Patrons or staff entered the water when ill with diarrhea	O Documented/observed	OSuspected	
	Stagnant or poorly circulating shallow water in swim area	O Documented/observed	OSuspected	
Environment	Heavy rainfall and runoff	O Documented/observed	OSuspected	
	□ Algal bloom	O Documented/observed	OSuspected	
	Seasonal variation in water quality	O Documented/observed	OSuspected	
	Animal contamination: Domestic: pet (e.g., dog)	O Documented/observed	OSuspected	
	Animal contamination: Domestic: livestock (e.g., cow, pig)	O Documented/observed	OSuspected	
	Animal contamination: Wildlife: birds (e.g., goose)	O Documented/observed	OSuspected	
	Animal contamination: Wildlife: Other <i>(specify): (e.g., deer)</i>	O Documented/observed	OSuspected	
	Animal contamination: Other <i>(specify):</i>	O Documented/observed	OSuspected	
	Sewage contamination: Wastewater treatment plant, sewer system	O Documented/observed	OSuspected	
	Sewage contamination: Septic tanks	O Documented/observed	OSuspected	
	□ Improper dumping of sewage (e.g., from boat, RV)	O Documented/observed	OSuspected	
	Application or release of chemical	O Documented/observed	OSuspected	
Policy and	□ No trained beach manager <sup>§</sup> on payroll or under contract	O Documented/observed	OSuspected	
management	□ No trained beach manager <sup>§</sup> on duty when initial outbreak exposure	O Documented/observed	OSuspected	
	Generation Monitoring of microbiological water quality <i>(e.g., frequency, site of water sample collection)</i> inadequate or absent	O Documented/observed	OSuspected	
	Inadequate communication (e.g., signage, website posting) to patrons of poor recreational water quality or closures	O Documented/observed	OSuspected	
	□ Hygiene facilities <i>(e.g., toilets, diaper-changing stations)</i> inadequate or distant from water venue(s)	O Documented/observed	OSuspected	
	Water venue(s) not designated and managed by state/local jurisdiction(s) as recreational water venue(s)	O Documented/observed	OSuspected	

\*Only select what was found during investigation.

<sup>+</sup> "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.

<sup>§</sup>A trained beach manager is defined as someone who has successfully completed training approved by appropriate state/local officials.

Rec Water-Untreated Drinking Water System
Other contributing factors
<u>Water quality management — drinking water system(s)</u>
1. Did the drinking water system(s) have any monitoring violations in the 1 month before the outbreak? OYes ONo OUnknown ONot Applicable
a. If yes, explain:
<b>9.</b> Did the driplying water events $(a)$ have any maximum contaminant level (MCL) violations in the 1 month before the outbreak?
2. Did the drinking water system(s) have any maximum contaminant level (MCL) violations in the 1 month before the outbreak? O Yes O No O Unknown O Not Applicable
a. If yes, explain:
3. Did the drinking water system(s) have any violations in the 12 months before the outbreak? <sup>§</sup> O Yes O No O Unknown O Not Applicable
a. If yes, explain:
<sup>s</sup> 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
Drinking water remarks
Factors contributing to drinking water contamination or increased exposure to contaminated drinking water
Location in system contributing to drinking water contamination
1. Was there a problem with the quality of the source water? O Yes (See contributing factor section 1 below) ONO O Unknown
<b>2.</b> Was water quality affected by a problem occurring with the water treatment or within the distribution system before entry into a building
or house?
○ Yes (See contributing factor section 2 below) ○ No ○ Unknown (NOTE: For a community water system, distribution refers to the system of pipes and storage infrastructure under the jurisdiction of the water utility prior to the water meter or property line if the system is not metered. For non-community and non-public water systems, distribution refers to the system of pipes and storage infrastructure prior to entry into a building or house)
<ul> <li>3. Was water quality affected by a problem occurring after the water meter or outside the jurisdiction of a water utility? (e.g., in a service line leading to a house/building, in the plumbing inside a house/building, during shipping/hauling, during storage other than in the distribution system, at the point of use, involving commercially-bottled water)</li> <li>Yes (See contributing factor section 3 below)</li> <li>No</li> <li>Unknown</li> </ul>

Factor	Drinking water contributing factors Select all that apply*	Documented/observed	or Suspected	
Unknown	Contributing factors are unknown	N/A		
Source water	Groundwater under direct influence of surface water (e.g., shallow well)	O Documented/observed	O Suspected	
	Contamination through limestone or fissured rock (e.g., karst)	O Documented/observed	OSuspected	
	Use of alternative source of water by a water utility	O Documented/observed	OSuspected	
	□ Algal bloom	O Documented/observed	OSuspected	
	Domestic animal contamination (e.g., livestock, concentrated feeding operation, pets)	O Documented/observed	OSuspected	
	Wildlife contamination	O Documented/observed	OSuspected	
	□ Improper construction, location, or maintenance of a well or spring	O Documented/observed	OSuspected	
	Extreme weather in area (e.g., flooding/heavy rains, drought)	O Documented/observed	OSuspected	
	Contamination from agricultural chemical application ( <i>e.g., fertilizer, pesticides</i> )	O Documented/observed	OSuspected	
	Contamination from chemical pollution not related to agricultural application	O Documented/observed	OSuspected	
	Wastewater contamination of drinking water source (e.g., septic system contaminating groundwater, community sewer system malfunction or overflow)	O Documented/observed	OSuspected	
Vater treatment/	Filtration inadequate or absent in drinking water system	O Documented/observed	OSuspected	
listribution system	Disinfection (e.g., chlorine, monochloramine) inadequate or absent in drinking water system	O Documented/observed	OSuspected	
	Gamma Aging or corroded water distribution components (e.g., pipes, tanks, valves)	O Documented/observed	OSuspected	
	Low water pressure event <sup>§</sup> in the distribution system	O Documented/observed	OSuspected	
	□ Wastewater contamination after water treatment (e.g., cross connection or malfunctioning back-flow preventer in distribution system)	O Documented/observed	O Suspected	
Dutside water	Temperatures in optimal range for opportunistic plumbing pathogen growth	O Documented/observed	OSuspected	
itility jurisdiction or at point of use	Disinfectant (e.g., chlorine, monochloramine) inadequate or absent in building water system	O Documented/observed	OSuspected	
	□ Stagnation of water in building water system (e.g., sporadic occupancy, poorly designed water system, interruption in water supply)	O Documented/observed	O Suspected	
	Construction in or around building	O Documented/observed	OSuspected	
	□ Water system components (e.g., pipe, tanks, disinfectant system, thermostat, valves) not functioning as designed	O Documented/observed	OSuspected	
	Equipment/device (e.g., soda machine) contamination or failure (e.g., leaching from device's water line, manufacturer maintenance recommendations not followed, design flaw)	O Documented/observed	O Suspected	
	Missing or poor adherence to industry compliant water management programs	O Documented/observed	OSuspected	
	Contamination of commercially-bottled water at point of use	O Documented/observed	OSuspected	

<sup>+</sup>"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.

<sup>§</sup>Low water pressure is relative to what is normally observed in the distribution system. Sources of low pressure could include events such as main breaks, maintenance activities, issues with back-flow or cross-connections, pump station activity, service interruptions (e.g., due to power outages), hydrant flushing, and heightened water demand.

#### Other contributing factors

## Other Exposures to Water, Including Other Environmental Exposures to Water

### Implicated water — water exposure description

1. How did the exposure(s) to the water system/source occur? Refer to list in Appendix E

Other exposures to water remarks

## Factors contributing to contamination and/or increased exposure to contaminated water

Factor	Contributing factors Select all that apply*	Documented/observed or Suspected <sup>+</sup>		
Unknown	Contributing factors are unknown	N/A		
Cross cutting	Missing or poor adherence to industry compliant water management programs	O Documented/observed	O Suspected	
	Presence of dirt, organic matter, or other debris in the basin or fill	O Documented/observed	OSuspected	
	Construction in or around the building	O Documented/observed	O Suspected	
	□ Missing or inadequate disinfectant	O Documented/observed	O Suspected	
	Lack of a written cleaning and maintenance plan/program	O Documented/observed	O Suspected	
	Temperatures in optimal range for opportunistic plumbing pathogen growth	O Documented/observed	O Suspected	
	Broken/damaged sewer pipe	O Documented/observed	O Suspected	
	Recycling of water	O Documented/observed	O Suspected	
Other	□ Improper start-up or shutdown procedures	O Documented/observed	O Suspected	
	□ Presence of scale or corrosion	O Documented/observed	O Suspected	
	Damaged or missing drift eliminators	O Documented/observed	O Suspected	
	□ Missing or inadequate scale and corrosion inhibitors	O Documented/observed	O Suspected	
	History of recent repairs to the device	O Documented/observed	O Suspected	
	□Location of device near high risk area (e.g., building air intake, windows that can be opened)	O Documented/observed	O Suspected	
	Intended as an ornamental fountain but utilized as an interactive fountain	O Documented/observed	OSuspected	
	□ Inadequate disinfection for recreational use	O Documented/observed	OSuspected	
	□ Inadequate filtration for recreational use	O Documented/observed	O Suspected	
	Presence of submerged lighting	O Documented/observed	O Suspected	

\*Only select what was found during investigation.

<sup>+</sup> "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.

Other contributing factors

**Und. Water Exposures** 

**Outbreak Detection** 

## **Undetermined Exposures to Water**

## Implicated water — water description

- 1. Which water exposure(s) were suspected in the outbreak? (Select all that apply)
- Treated recreational water
- Untreated recreational water
- Drinking water in public or individual water systems
- Other exposures to water including environmental exposure to water
- Specific water exposure(s) could not be identified

#### Undetermined exposure to water remarks

## Factors contributing to contamination and/or increased exposure to contaminated water

1. Were any contributing factors documented or suspected<sup>†</sup> in this outbreak investigation? O Yes O No O Unknown <sup>†</sup> "Documented" 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.

If yes, please describe the contributing factors below.

### **Contributing factors**

# **Outbreak Detection & Investigation Methods**

## Outbreak Detection — How was the outbreak initially detected? Select all that apply

Environmental

Food preparation review

drinking water

or sample testing

• Other (specify):

□ Water system assessment:

Water system assessment:

water venue assessment

Treated or untreated recreational

Environmental, food, water, animal,

non-potable water

- Public complaint to health department
- Routine public health surveillance interview
- Notification from facility
- (e.g., long-term care facility, school, prison, restaurant)
- Healthcare provider report
- Notification from CDC lab system (e.g., PulseNet)
- Investigation Methods Select all that apply

## **Epidemiologic**

- Binomial probability assessment
- □ Case-control study
- □ Case-case study
- Cohort study
- □ Interviews only of ill persons
- Other *(specify):*

# Notification from other CDC group Notification from other public health lab

- Website or social media (e.g., Twitter, Yelp, Facebook)
- Media report from news outlet
- □ Other *(specify):*

#### **Traceback**

- □ Food, animal, or water investigation
- Consumer purchase records *(e.g., shopper card)*
- Investigation at distributor, supplier, or production facilities (e.g., factory, treatment plant)
- Investigation at original source (e.g., farm, water source)
- Other (specify):

#### Investigation methods comments

Other Linked CDC Sys	stems			
<u>NEARS</u> NEARS Evaluation ID	1	2	3	4
<u>ohhabs</u> Ohhabs ID	1	_ 2		

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	<b>N</b> '/					
		<b>U</b>		0		

- 1. Were any interventions recommended or implemented to help stop the outbreak? OYes ONo OUnknown
  - a. If no, explain why none were recommended or implemented.
  - **b.** If yes, what type(s) of interventions were recommended or implemented to help stop the outbreak? *Select all that apply in the table below using list in Appendix E.*

#### **Directions:**

#### Intervention Type

Any intervention type can be selected for any mode of transmission regardless of the header listed for each table below.

#### Any Point of Intervention OR Point of Exposure

Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions at the point of exposure in the "Any Point of Intervention OR Point of Exposure" column.

#### **Recommended or implemented at other points of intervention**

Complete only for animal contact, foodborne, and indeterminate/unknown outbreaks for columns:

- Point of distribution
- Point of processing
- Source

#### Facility/site/venue and equipment - Recommended and Implemented Interventions

Any Point of Intervention OR Point of Exposure (Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions at the point of exposure)	Point of distribution* (e.g., shipping facility, transportation equipment)	Point of processing* (e.g., pasteurization plant)	<b>Source*</b> (e.g., farm)
	Intervention OR Point of Exposure (Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions	Intervention OR Point of Exposure (Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions (e.g., shipping facility,	Intervention OR Point of Exposure       Point of         (Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions       Point of         distribution*       Point of         (e.g., shipping facility,       processing*

People – Recommended and Implemented	I Interventions			
Intervention type	Any Point of Intervention OR Point of Exposure (Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions at the point of exposure)	<b>Point of</b> <b>distribution*</b> (e.g., shipping facility, transportation equipment)	Point of processing* (e.g., pasteurization plant)	<b>Source*</b> (e.g., farm)
III workers excluded				
III workers restricted				
III children or persons excluded				
Ward(s) closed to new admissions				
Visitors excluded				
Asymptomatic persons' stools screened (e.g., for exclusion)				
III persons' stools screened (e.g., for exclusion)				
Vaccination or prophylaxis				
Isolation/quarantine/cohorting				
Education/training (e.g., hand washing, certification)				

\*Complete for animal contact, foodborne, and indeterminate/unknown outbreaks

## Animals- Recommended and Implemented Interventions

Intervention type	Any Point of Intervention OR Point of Exposure (Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions at the point of exposure)	Point of distribution* (e.g., shipping facility, transportation equipment)	Point of processing* (e.g., pasteurization plant)	<b>Source*</b> (e.g., farm)
Animal(s) quarantined or movement stopped				
Animal(s) relocated				
Herd culled				
Vaccination or prophylaxis				
*Complete for animal contact, foodborne, and ind	eterminate/unknown outbreaks			

Food – Recommended and Implemented In	nterventions			
Intervention type	Any Point of Intervention OR Point of Exposure (Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions at the point of exposure)	Point of distribution* (e.g., shipping facility, transportation equipment)	Point of processing* (e.g., pasteurization plant)	<b>Source*</b> (e.g., farm)
Menu modified				
Food preparation processes modified				
Self-service discontinued				
Food withdrawn (before recall)				
Food discarded				
Food embargoed				
Food source modified (e.g., vendor)				

\*Complete for animal contact, foodborne, and indeterminate/unknown outbreaks

## Water - Recommended and Implemented Interventions

Intervention type	Any Point of Intervention OR Point of Exposure (Complete for all modes of transmission. For animal contact, foodborne, and indeterminate/unknown outbreaks, enter interventions at the point of exposure)	Point of distribution* (e.g., shipping facility, transportation equipment)	Point of processing* (e.g., pasteurization plant)	Source* (e.g., farm)
Water restrictions issued				
Water advisory issued (e.g., drinking, swimming)				
Water chemically treated (e.g., hyperchlorination, secondary disinfection)				
Water filtered				
Water system superheated				
Water system flushed				
*Complete for animal contact, foodborne, and inc	leterminate/unknown outbreaks			

Other - Recommended and Implemented Interventions         Intervention QP point of Intervention CR Point of transmission. For aimal centract, toodborne, and indeterminate/unknown outbreaks, enter interventions at the point of exposure (e.g., shipping facility, transportation equipment)       Point of processing* (e.g., pasteurization plant)         Other (specify):	<b>Source*</b> (e.g., farm)
Other (specify):	
Other (specify):	
*Complete for animal contact, foodborne, and indeterminate/unknown outbreaks 2. Were any public communications released for this outbreak? (e.g., press release or outbreak notice)  Yes  No  If yes, by what group(s)? (Select all that apply)	
2. Were any public communications released for this outbreak? (e.g., press release or outbreak notice) Yes No If yes, by what group(s)? (Select all that apply) State/local/territorial health department Other state/local/territorial government agency (specify):	
If yes, by what group(s)? (Select all that apply)  State/local/territorial health department  Other state/local/territorial government agency (specify):	
Remarks	

Please attach summaries or add links to relevant publications. Thank you for completing this form. These data will help us prevent illnesses.