



Washington State Department of

Health

VIBRIO PARAHAEMOLYTICUS ILLNESS TRACEBACK

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WSEHA AEC May 2019

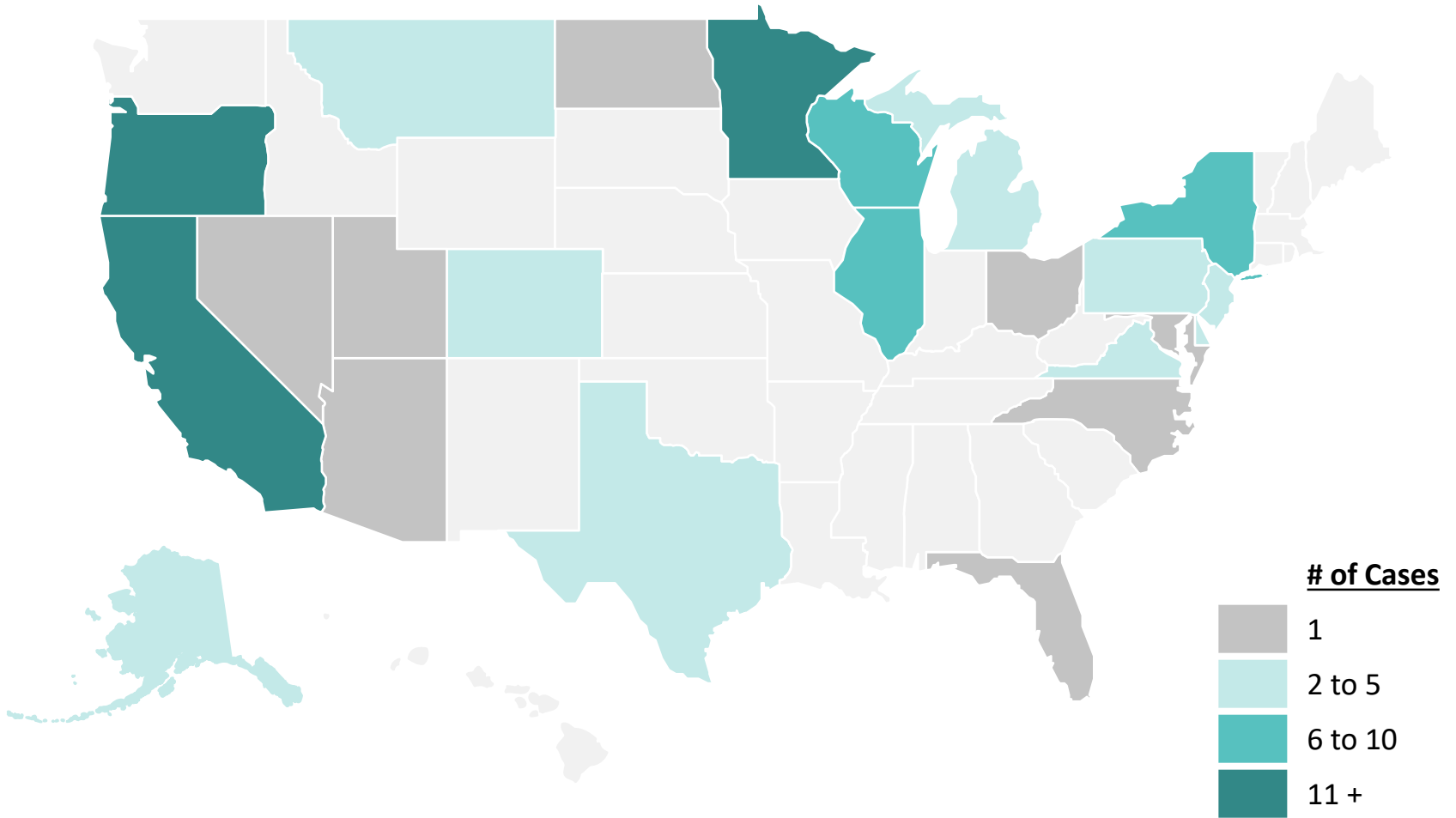
What We'll Cover

- 2018 Vp Illness Counts
- Traceback Objectives
- Records as Evidence
- Commercial Traceback
- Non-commercial/Recreational Traceback

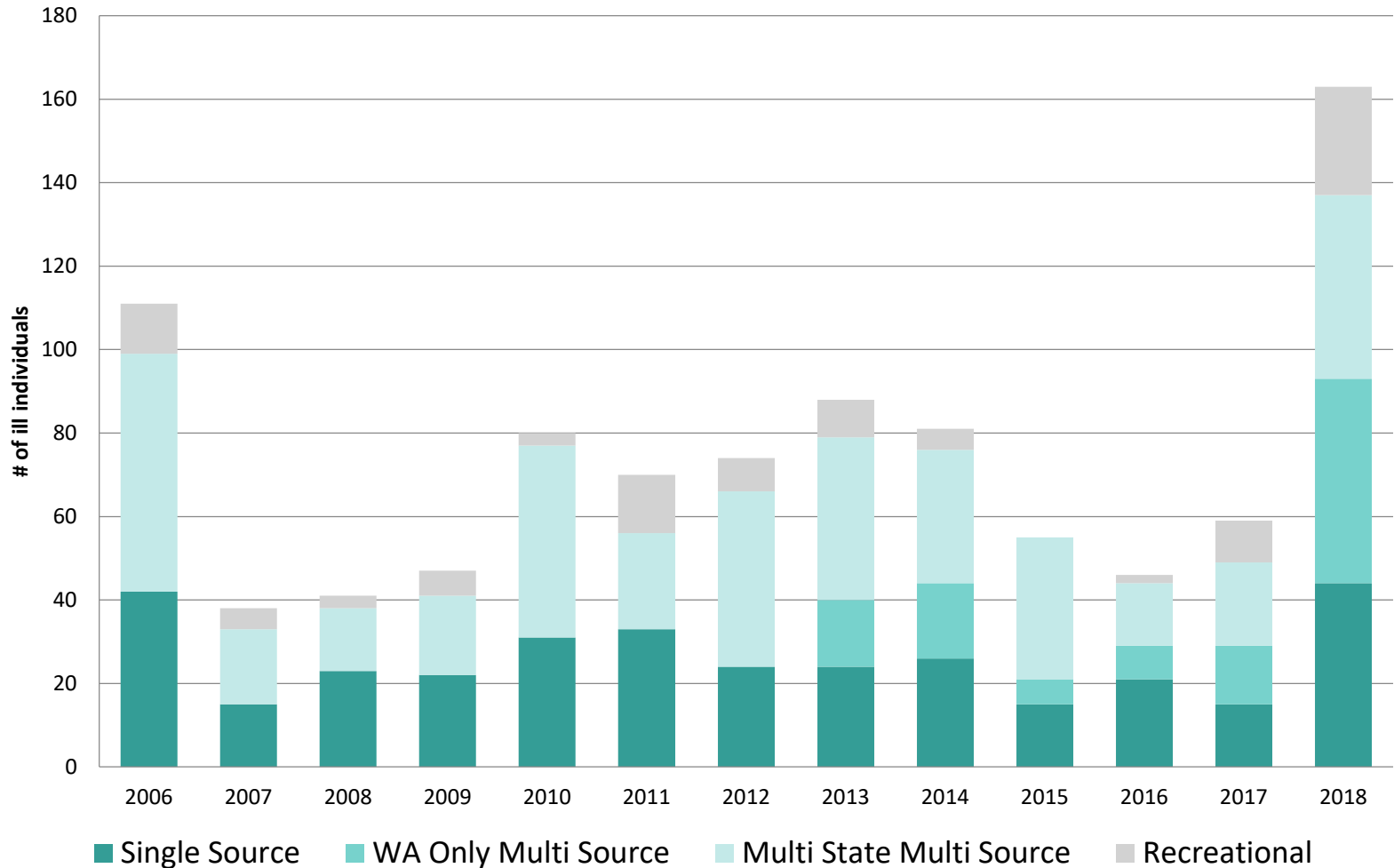
2018 *Vp* Illness Counts

Lab-confirmed cases who reported eating shellfish	Oyster-related cases possibly from WA growing area	Non-commercial and recreational cases
WA – ~200	Single-source – 44	26
Other States – 103	Multi-source – 93	

Out-of-State Vp Illnesses



Total *Vibrio* Illnesses from Oyster Consumption (Attributed to WA State Growing Areas by Year)



Other Vibrio Illnesses

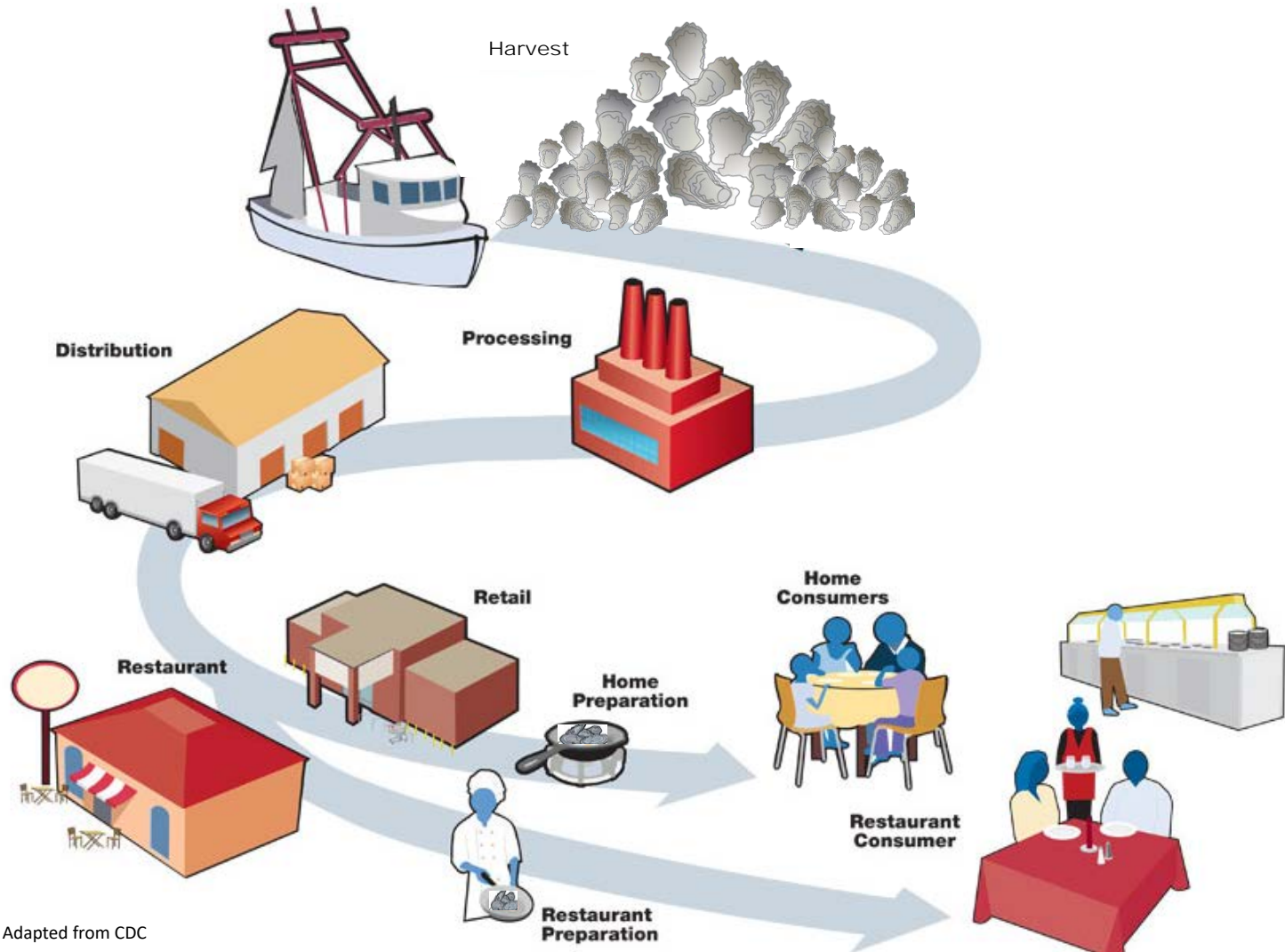
- *Grimontia hollisae*
 - 1 case possibly from undercooked/unopened clam.
- *Pseudomonas aeruginosa*
 - 1 case possibly from shucked oysters.
- *Vibrio cincinnatiensis*
 - 1 case (MN) from raw shellstock (large MS).
- *Vp/Vibrio fluvialis*
 - Co-infection. 1 case (MN) from raw shellstock (large MS).
- *Vibrio alginolyticus, Vibrio mimicus*
 - 2 cases (wound and ear infection) from exposure to recreational water.
- *Vibrio Vulnificus*
 - 1 case with exposure to OR recreational water.

Traceback Objectives

- Identify illness source
- Close growing area
- Remove product from market

PREVENT FURTHER ILLNESS

Route of Infection vs. Traceback



Records as Evidence

- Tag collection is just the beginning...
- Accurate records are key to tracing back shellfish to original source.
- Documents the distribution through the supply chain for product implicated in illness investigation.
- Provide evidence to support public health and regulatory decisions.
- Support decision to recall and remove product from distribution.

Commercial Traceback Process



Retail Food Service

Collect tags/invoices based on exposure

Identify shipments and involved dealers

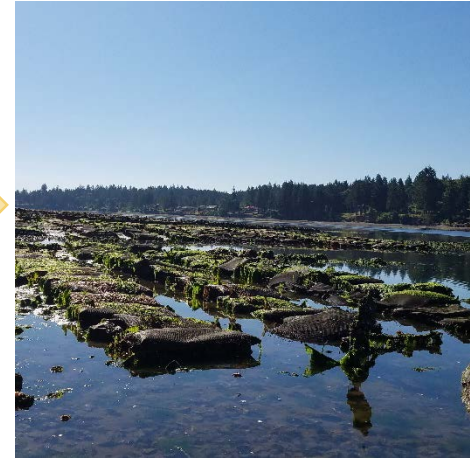
Post-harvest abuse identified?



Dealer/Grower

Determine source:

- Tags/Invoices
- Shipping Records
- Transaction Documents
- Harvest Records



Growing Area

Take action!

Traceback for Commercial Illnesses – Retail

THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RETAGGED AND THEREAFTER KEPT ON FILE IN CHRONOLOGICAL ORDER, FOR 90 DAYS. RETAILERS: DATE WHEN LAST SHELLFISH FROM THIS CONTAINER WAS SOLD OR SERVED:

PERISHABLE KEEP REFRIGERATED

“RETAILERS, INFORM YOUR CUSTOMERS”

“Thoroughly cooking foods of animal origin such as shellfish reduces the risk of foodborne illness. Individuals with certain health conditions such as liver disease, chronic alcohol abuse, diabetes, cancer, stomach, blood or immune disorders may be at higher risk if these foods are consumed raw or undercooked. Consult your physician or public health official for further information.”



Traceback for Commercial Illnesses

- Have tags/invoices, EH report/notes, and other information about retailer from LHJ
- Next Steps:
 - Review tags with epi information – try to eliminate some
 - Send out-of-state tags to other state shellfish authority
 - If tags were collected in response to an out-of-state case, send tags, EH notes, and completed COVIS section 5.

COVIS Section 5

State: _____ Year: _____

Age: _____ Sex: _____ Last Name: _____

5. SEAFOOD INVESTIGATION (Please complete one copy of this page for each type of seafood ingested and investigated, and identify investigation page number below. Completion of this page is optional for probable cases.)

Seafood Investigation page ____ of ____

Product information

1. Type of seafood being investigated: _____ 2. Date consumed (MM/DD/YY): _____

3. Amount consumed (e.g., 6 oysters, 1 filet, 5oz, etc.) : _____

4. How prepared: Fully cooked Undercooked Raw Unknown

5. Additional relevant information on product preparation (e.g., specific variety of seafood consumed and plating): _____

6. Was this fish or shellfish harvested by the patient or a friend of the patient? Yes No Unknown

(If yes, skip to source information questions. If no, complete entire page as possible.)

Commercial vendor Information (only complete if product consumed at a commercial establishment)

1. Name of restaurant, oyster bar, or food store: _____

Address: _____ Tel: _____

City/State: _____

2. Type of establishment: Oyster bar or restaurant Seafood market Unknown
 Truck or roadside vendor Other (specify): _____
 Food store

3. Date restaurant or food outlet received seafood (MM/DD/YY): _____

4. Was the seafood imported from another country? Yes No Unknown

If yes, name of country: _____

5. Was a restaurant or outlet environmental assessment conducted? Yes No Unknown

6. Was there evidence of improper handling or storage? Yes No Unknown

If yes (check all that apply): Holding temperature violation Cross-contamination Co-mingling of live and dead shellfish

Improper storage Other: _____

7. If oysters, clams, or mussels were eaten, how were they received by the retail outlet?

Live shellstock Processed animal with shell attached Shucked meat Unknown Other (specify): _____

Traceback for Commercial Illnesses – Dealer/Grower

Start working backwards:

- Contact product distributor, shellfish dealers, and growers for records.
- What records are collected depends on the details of the case:

1

Distributor

Invoices of product shipped to retail (*if not provided by retailer*)

No temperature logs (*unless shellfish has been stored > 24 hours*)

2

Dealer

Invoices and shipping/sales records

Original tags (*if re-tagged*)

No temperature logs (*unless shellfish has been stored > 24 hours*)

3

Grower

Invoices and shipping/sales records

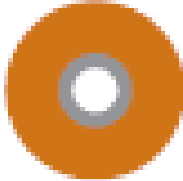
Harvest Records

Storage temperature and thermometer calibration logs

Traceback for Commercial Illnesses – Dealer/Grower

- Sufficient and accurate records will allow shellstock to be traced back to:
 - Growing area
 - Date(s) of harvest
 - Date and location of wet storage
 - Single harvester, group of harvesters, or tribal harvest

Example - Dealer Tag



PERISHABLE KEEP REFRIGERATED	ALASKA SHELLFISH FARMS, LLC 57537 Taku Ave, Homer, AK 99803 (907) 299-2451	CERT# AK-6947-SS
ORIGINAL SHIPPER'S CERT. No. IF OTHER THAN ABOVE:		
ORIGINAL HARVEST DATE:		SHIPPING DATE:
HARVEST LOCATION: HALIBUT COVE, KACHEMAK BAY, AK		
TYPE OF SHELLFISH: GLACIER POINT OYSTERS		
PRODUCT OF USA		FARM RAISED
WET STORED AT AK-6947-SS FROM: _____ TO: _____ Lot#: _____		
QUANTITY OF SHELLFISH:		120 COUNT
THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RETAGGED AND THEREAFTER KEPT ON FILE IN CHRONOLOGICAL ORDER, FOR 90 DAYS. RETAILERS: DATE WHEN LAST SHELLFISH FROM THIS CONTAINER WAS SOLD OR SERVED:		
TO: _____		

Example – Dealer Bulk Tag

"Keep Refrigerated"

XYZ Shellfish Company
1195 Commercial Way, Metropolis, WA 98000
Cert. # WA-9999-SS

ORIGINAL SHIPPER'S CERT. NO. (if other than above):

HARVEST DATE: ***November 17, 2010***

HARVEST LOCATION: ***WA-Totten Inlet***

TYPE OF SHELLFISH: ***Manila Clams***

"BULK" QUANTITY OF SHELLFISH: _____ dozen _____ pounds

THIS TAG IS REQUIRED TO BE ATTACHED
THEREAFTER KEPT ON FILE FOR 90 DAYS

TO:	RE CE

RETAILERS, INFORM YOUR CUSTOMERS

Consuming raw or undercooked meats, poultry, seafood, shellfish, or eggs may increase your risk of foodborne illness, especially if you have certain medical conditions.

BULK LOT: All shellstock containers in this lot have the same Harvest Date, Growing Area and Harvest Site.

Example – Harvester Bulk Tag

Pickled Shellfish Company
2390 Fish Way
Aberdeen, WA 98520
Cert # WA-1234-HA

Harvest Date: **1/16/10**

Harvest Location: **WA-Totten Inlet**

TYPE OF SHELLFISH: **Pacific Oysters**

"Bulk" Quantity of Shellfish: Bushels _____ Dozen _____ Pounds _____ Count _____

THIS TAG IS REQUIRED TO BE ATTACHED UNTIL THE CONTAINER IS EMPTY OR RETAGGED AND THEREAFTER KEPT ON FILE FOR 90 DAYS

***BULK LOT:** All shellstock containers in this lot have the same harvest date, growing area, and harvest site and number of individual containers in unit.*

Shipping Records

- Invoice
- Bill of Lading
- Manifest
- Includes:
 1. Shipping dealer's name, address, and certification number
 2. Major consignee's name and address
 3. Kind and quantity of product

Example - Product Invoice

INVOICE

SHELLFISH DEALER A

1234 MAIN ST., ANY TOWN, USA, 90058 | Tel: 555-555-5555 | Fax: 555-555-5556

Invoice Number: SI138360
Invoice Date: 3/14/2019
Page: 1

Bill To:
SHELLFISH DEALER B

Ship To:
SHELLFISH DEALER B

Ship Date	3/14/2019	Customer No.:	C102103	Order No.:	SO155988
Ship Method	FOBDEST	P.O. Number	OYSTER 3/14		
Ship Via	Brown Line Trucking	P.O. Date	3/14/2019		
Terms	Net 30 days	Written By			
Due Date	4/13/2019	Salesperson			

Item/Description	Pack	Whse. Qty.	Whse. UOM	Qty.	UOM	Unit Price	Extended Price
15001 - Oyster Shell Pacific Large Farm Brand:WA GROWING AREA COO:USA MOC:FARM Lots: PO0027796-1 Qty: 400	1/60	400	BAG	400	BAG	29.00	11,600.00
15002 - Oyster Shell Pacific Medium Farm Brand:WA GROWING AREA COO:USA MOC:FARM Lots: PO0027796-2 Qty: 100	1/60	100	BAG	100	BAG	29.00	2,900.00

Example – Product Invoice

INVOICE

№ 018151

PLEASE PAY FROM THIS INVOICE
NO STATEMENT WILL BE SENT.

S
O
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O

Shellfish Dealer A
California Address

S
H
I
P

T
O

Shellfish Dealer B
California Address

INVOICE DATE	CUSTOMER ORDER NO.	F. O. B.	P P D. <input type="checkbox"/>	OUR ORDER NO.	TERMS	SALESMAN
3-12-19	27796		COLLECT <input type="checkbox"/>		NET 21	
DATE SHIPPED	SHIPPED VIA			WEIGHT	RESALE NO.	
3-12-19	BROWN LINE					
QUANTITY ORDERED	QUANTITY SHIPPED	DESCRIPTION		UNIT PRICE	AMOUNT	
	100 BAGS	500 doz MED - 5 doz/BAG		19.60/BAG		
	400 BAGS	2000 doz LG - 5 doz/BAG		21.10/BAG		

Example - Bill of Lading

STRAIGHT BILL OF LADING - SHORT FORM

NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number."

Original - Not Negotiable

Date 3-12-19 Bill of Lading No. _____

Shipper No. _____
Carrier No. 6063766

BROWN LINE
(Name of Carrier)

TO: Consignee Shellfish Dealer B Street: California Address Destination: _____	FROM: Shipper Shellfish Grower Street: Washington Address Origin: WA-0000-SS
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Route: PO# 27796 Vehicle No. _____ SCAC _____ Emergency Response Phone Number _____

No. Shipping Units	+HM	Kind of Packaging, Description of Articles Special Marks and Exceptions	Weight (Subject to Correction)*	Rate or Class	CHARGES
100		SHELL STOCK (MED-5 doc/BAG)	1800 #		
400		" (LG-5 doc/BAG)	12,400 #		
*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading state whether weight is "carrier's or shipper's weight".					
REMIT C.O.D. TO: ADDRESS C.O.D. Amt. \$ C.O.D. FEE: PREPAID <input type="checkbox"/> COLLECT <input type="checkbox"/> \$ TOTAL CHARGES: \$					
TIME OF P/U: <u>3:15 PM</u> TRUCK TEMP: <u>34°</u> No. OF PALLETS: <u>9</u>					
(500) (14,200#)					

Note-Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ _____ per _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement. The carrier shall not make delivery of this shipment without payment of freight and all other charges.

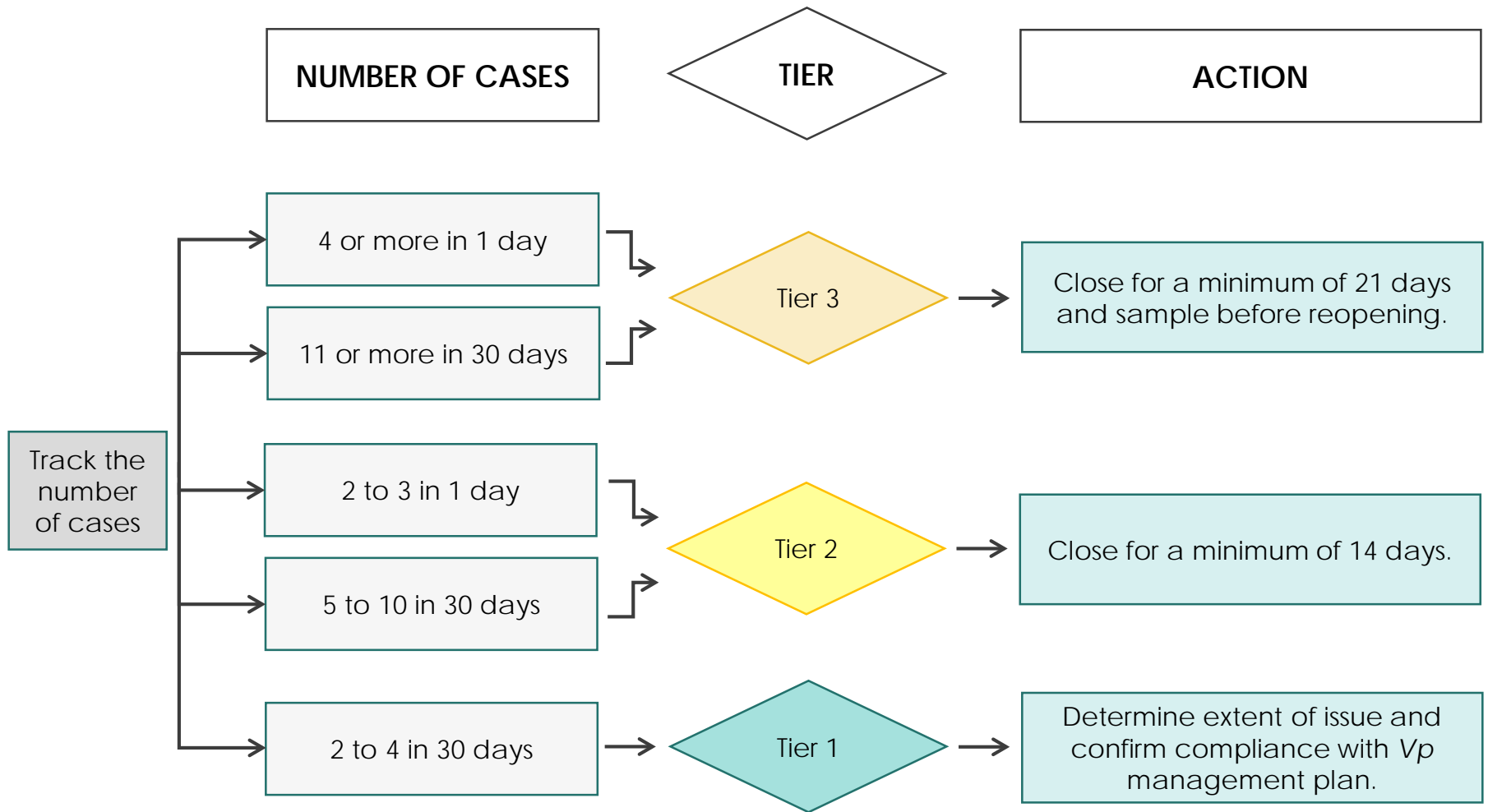
FREIGHT CHARGES
Check Appropriate Box:
 Freight prepaid
 Collect

(Signature of Consignor)

Commercial Traceback Process

- Attempting to determine if illness is caused by growing area water or other issue
- Identifying post-harvest abuse during traceback
- ***What constitutes post-harvest abuse for vibrio?***
 - Cold holding temperatures
 - Cross-contamination
 - Improper storage and handling
 - Commingling of live and dead shellfish

Vibrio Closure Tiers



Vibrio Traceback: WA Exposures Only

7/1

Oyster harvest date.

7/13

Case #1 Reported: MN resident w/ confirmed Vp; 1/3 ill; ate raw oysters at King County restaurant on 7/7; HH Special (only 1 oyster variety).

7/16

EH request sent: inspection completed same day and tags received.

7/18

DOH shellfish investigation completed.

7/26

Case #2 reported: Kitsap County resident w/ probable Vp; ate raw oysters at local restaurant on 7/6; no variety or menu item specified.

7/27

EH Inspection completed 7/26. Tags received 7/27.
Shellfish company contacted regarding case and potential closure.

7/31

Case #2 Illness Confirmed as Vp.

8/1

Northern portion of growing area closed for 14 days. All companies harvesting there contacted. No product recall.

Vibrio Traceback: Out-of-state Exposures

8/2

Oyster harvest date.

8/21

Case #1 reported: AK resident w/ confirmed Vp; ate raw oysters at AK restaurant on 8/7. Details of EH visit and tags provided with report.

8/23

DOH shellfish investigation completed.

9/4

Case #2 reported: CA resident w/ confirmed Vp; ate raw oysters at same AK restaurant on 8/6. Details of EH visit and tags provided with report. Growing area closed.

9/5

Case #3 reported: WA resident w/ confirmed Vp; purchase raw oysters at AK retailer and ate 8/10 & 8/11. Details of EH visit and tags provided with report.

Traceback for Non-commercial Illnesses

- Require accurate reporting of where shellfish came from
- Collect all information available and track illness numbers
- Notify county staff of illnesses associated with recreational beaches
- Work with WDFW to close recreational beaches if necessary

Questions?



Erika Atherly

Illness Prevention Coordinator

Shellfish Licensing & Certification

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@WADeptHealth



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