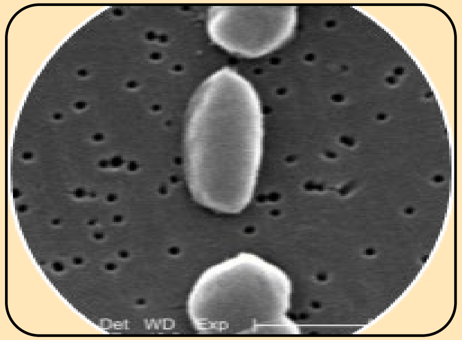
VP TRAINING & UPDATES

What are *Vibrio*?



Vibrio are a genus of bacteria.

They are naturally occurring in marine and estuarine environments.

Present in higher numbers as water temps increase.

Vibriosis is the illness caused by some Vibrio species

~20 types of *Vibrio* can cause illness in humans.

Most people become infected by eating undercooked shellfish.

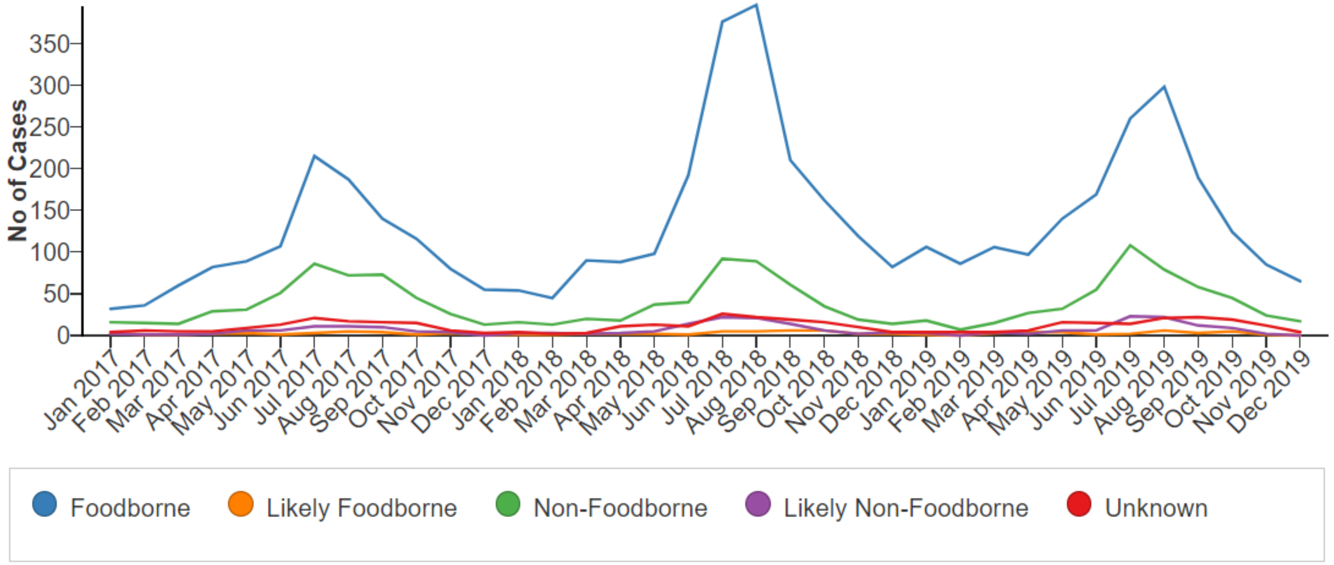
Vibrio parahaemolyticus (*Vp*) is the most common cause of Vibriosis in Washington.

Vibrio vulnificus (*Vv*) is also found in the PNW in oyster tissue but has not caused foodborne illness yet.

Confirmed Vibrio cases in US in 2019

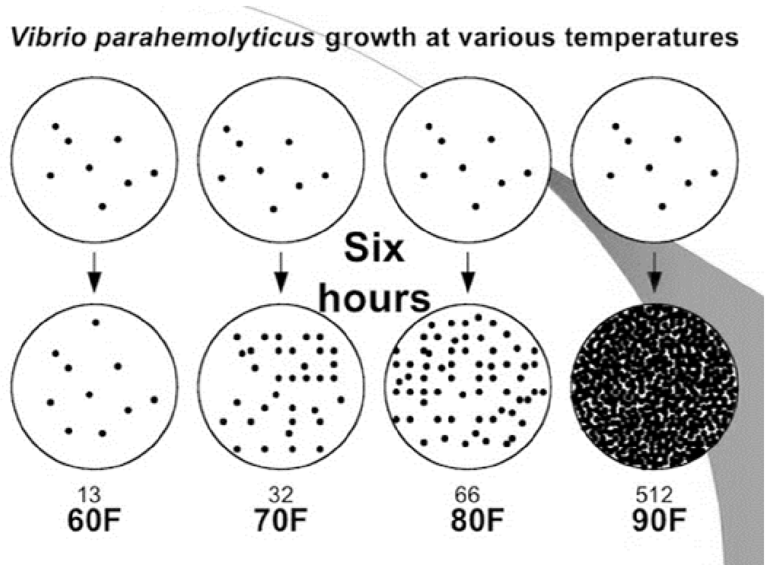
Genus/species	Cases	% Hospitalizations	% Deaths
V. parahaemolyticus	655	20%	1%
V. vulnificus	158	87%	21%

Frequency of domestically acquired vibriosis cases,* by month† and transmission route, United States, 2017–2019 (N=7,004)



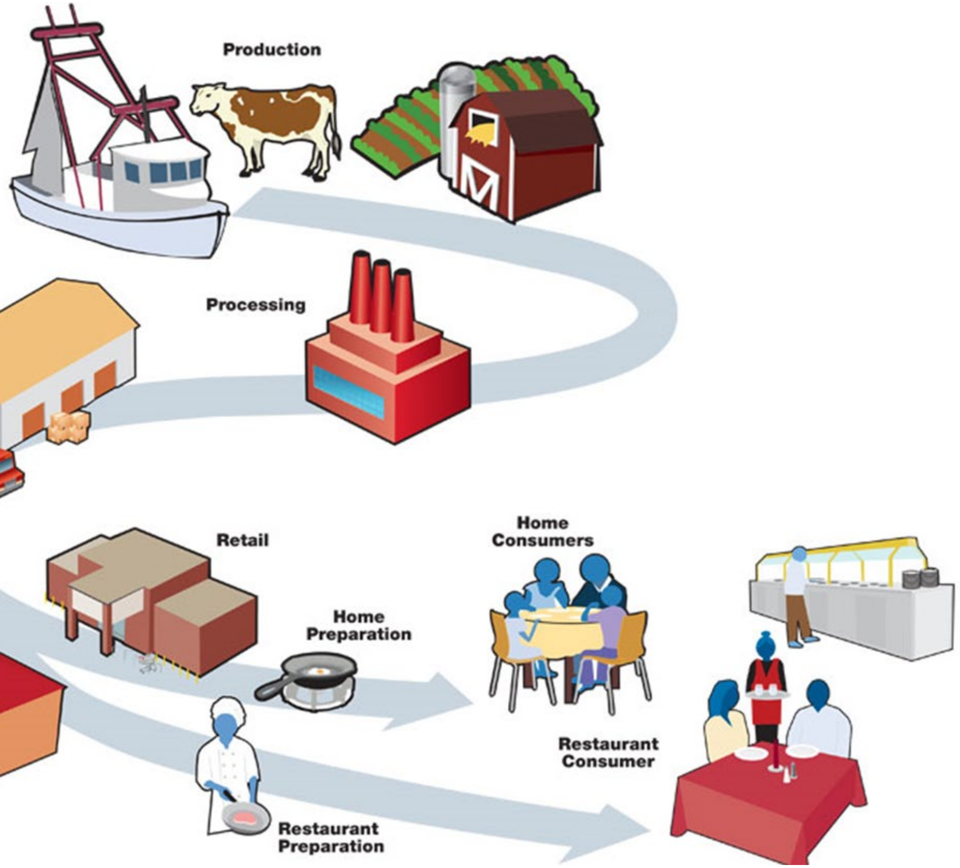
Vibrio parahaemolyticus

- Highly temperature dependent
  - Post-harvest cooling important to limit growth
- Many strains, but only some cause illness
- Genetic markers to identify presence and likelihood to cause illness
  - *tlh*
  - *tdh*
  - *trh*

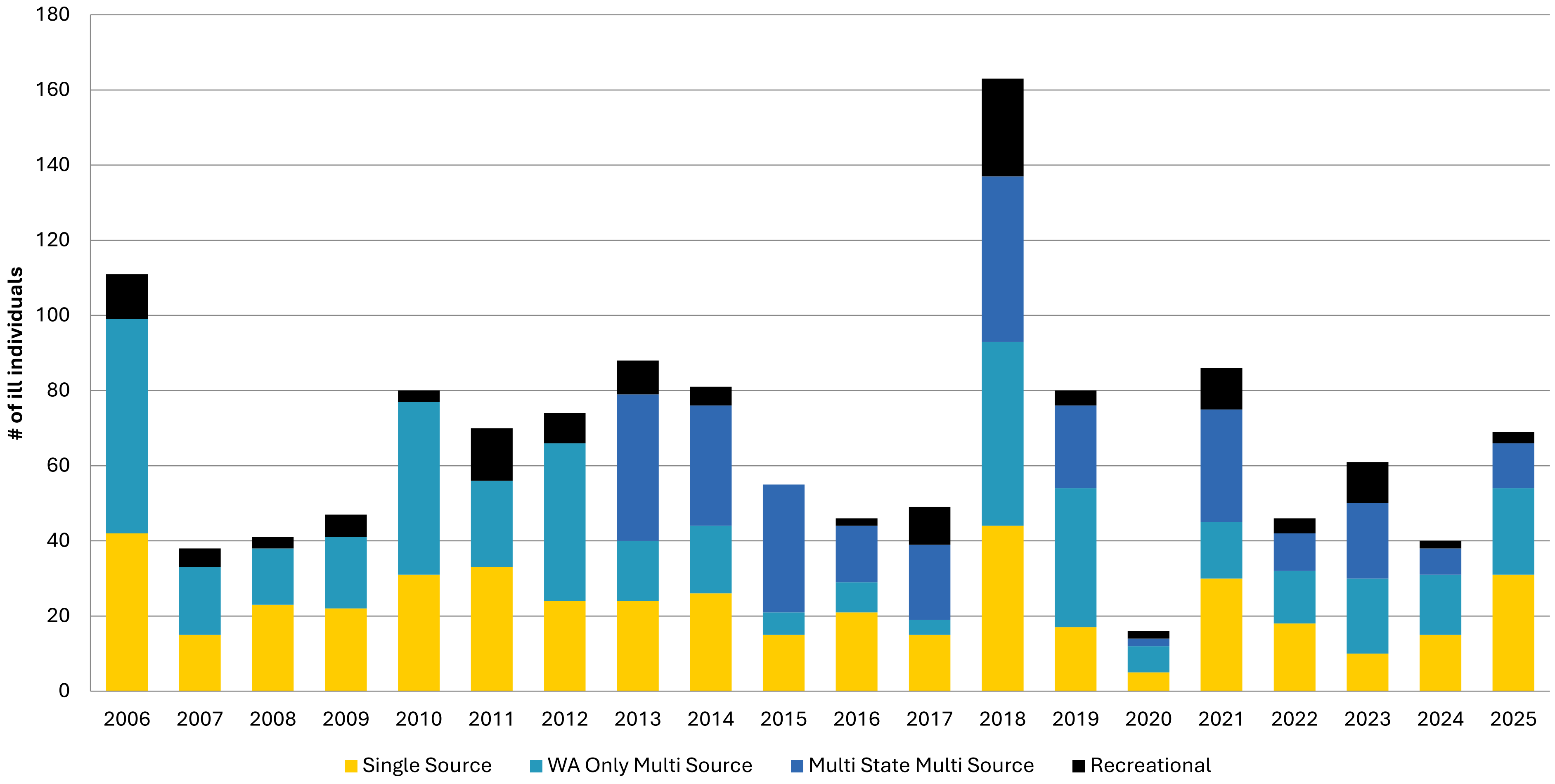


Doubling Time (hrs)	7.24	3.01	1.64	1.03

From the Beach To the Table



Confirmed *Vp* Illnesses Attributed to Oyster Shellstock from Washington from 2006 to 2025

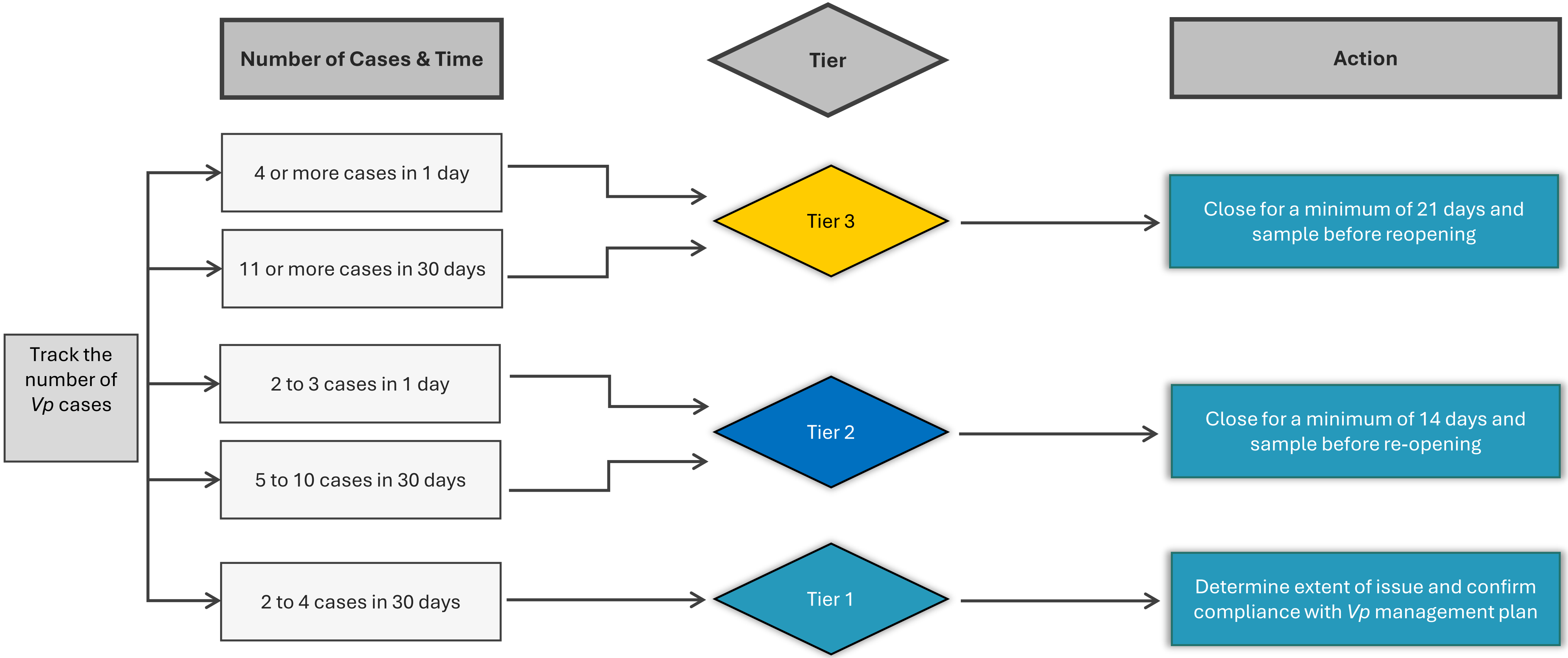


Summary of Confirmed *Vp* Associated Illnesses

Year	2025	2024	2023	2022	2021
Commercial Single-Source	**31**	15	10	18	30
Commercial Multi-Source	**35**	23	40	22	44
WA Only	**23**	16	20	13	16
WA & Other States	**12**	7	20	9	24
Non- Commercial (Recreational & Private)	**3•**	2	11	3	11
Shucked Oysters	**1***	0	2	1	3

*2 additional shucked meats cases involved Sm and Ss, and were counted as multisource illnesses
• 1 additional case included rec and commercial oyster exposures and was counted as a multisource case

Model Ordinance Closure Requirements



WAC 246-282-006 *Vp* Control Plan

- § means there is a significant change in the section
  - Not just re-numbering or grammatical

- Slides will be posted on our website

- Guidance documents available for changes

WAC 246-282-006 *Vp* Control Plan

Section 1:

- Establishes control plan and control months: May 1 through September 30
- Requirements in WAC are in addition to Model Ordinance

Section 2:

- Exempts oysters harvested and delivered to certified shucker-packer for shucking or PHP.
- Requires appropriately labeled harvest tag.

Section 3:

- Requirement to report oyster production data by growing area, species, month, and size (Pacifics)
- May not harvest May-Sept if not reported
- Production Data due Jan 15th

WAC 246-282-006 *Vp* Control Plan §

Section 4 §:

Requires a harvest plan be:

- Signed and dated each year
- Submitted at least **2 weeks** before first planned harvest

Section 5:

Harvest plan must include:

- Harvest Temperatures, cooling and conveyance methods
- Examples or harvest temp record
- Identify harvest temp as water or internal oyster temp

WAC 246-282-006 *Vp* Control Plan §

Section 6 §:

- Department shall review and either approve or deny the harvest plan within **<u>14 days</u>** of receipt.
- Harvest cannot happen within the control months without and approved plan.

Section 7:

- The operation must follow their approved harvest plan.
- Failure to follow could lead to enforcement action.

WAC 246-282-006- *Vp* Control Plan

Section 8: Risk Categories

- Time to cooling is determined by risk category of each growing area.
- Categories are determined by illness cases

<u>Each Case Must:</u>

✓ Be associated with commercially harvested shellstock

✓ Not involve documented post-harvest abuse

✓ Can be traced back to a single growing area

✓ Be culture confirmed *Vp*

✓ Occurred during the previous consecutive 5-year period

✓ Occurred within the control months of May-Sept

WAC 246-282-006- *Vp* Control Plan

Category 3

- Average of 1.0+ cases *(≥ 5 per 5 years)*

Category 2

- Average of > 0.2 but < 1 cases *(1 to 4 per 5 years)*

Category 1

- Average of ≤ 0.2 cases *(≤ 1 per 5 years)*

Section 9

- ❑ Requires the department to complete and publish risk categories no later than February 1st annually

Knowledge Check ☑

How far in advance do you need to submit your harvest plan before planned harvest?

a) 30 days
b) 14 days
c) March 1st
d) After I started harvesting

Knowledge Check ☑

How far in advance do you need to submit your harvest plan before planned harvest?

a) 30 days
b) **14 days**
c) March 1st
d) After I started harvesting

- This new requirement allows for more flexibility for growers and no longer sets a hard date for submittal.

Knowledge Check ☑

How are risk categories calculated? (choose all that apply)

a) Production data
b) Illness complaints, not lab confirmed
c) 5-year average of single source, confirmed Vp illnesses
d) 5-year average of multisource cases

Knowledge Check ☑

How are risk categories calculated? (choose all that apply)

a) Production data
b) Illness complaints, not lab confirmed
c) 5-year average of single source, confirmed Vp illnesses
d) 5-year average of multisource cases

Section 10

WAC 246-282-006 *Vp* Control Plan §

Risk Category 1 (Old Version)

Requirements	Time to Cooling
Except as noted below, the time of harvest to cooling requirement from ~~June~~ 1st through September 30th is:	9 Hours
When ambient air temperature at harvest is greater than 90°F, the time of harvest to cooling requirement is:	7 Hours
When harvest temperature is ~~between~~ 68°F and 70°F ~~from July 1st through August 31st~~, the time to cooling requirement is:	5 Hours
Harvest Control: ~~From July 1st through August 31st,~~ Harvest is not allowed for 24 hours when harvest temp is above 70°F	

Risk Category 1 (New Version)

Condition at Harvest:	Time of Harvest to Cooling:
Except as noted below, the time of harvest to cooling requirement is:	9 Hours
When **ambient air temperature** is 90.0°F or above:	7 Hours
When **harvest temperature** is 68.0°F to 70.0°F:	5 Hours
When **harvest temperature** is above 70.0°F:	Harvest is not allowed for 24 hours

WAC 246-282-006 *Vp* Control Plan §

Risk Category 2 (Old Version)

Requirements	Time to Cooling
Except as noted below, the time of harvest to cooling requirement from May 1st through September 30th is:	7 Hours
When ambient air temperature at harvest is greater than 85°F, the time of harvest to cooling requirement is:	5 Hours
When harvest temperature is ~~between~~ 66°F and 68°F ~~from July 1st to August 31st~~, the time	3 Hours
Harvest Control: ~~From July 1st through August 31st,~~ harvest is not allowed for 24 hours when harvest temp is above 68°F	

Risk Category 2 (New Version)

Condition at Harvest:	Time of Harvest to Cooling:
Except as noted below, the time of harvest to cooling requirement is:	7 Hours
When **ambient air temperature** is 85.0°F or above:	5 Hours
When **harvest temperature** is 66.0°F to 68.0°F:	3 Hours
When **harvest temperature** is above 68.0°F:	Harvest is not allowed for 24 hours

WAC 246-282-006 *Vp* Control Plan §

Risk Category 3 (Old Version)

Requirements	Time to Cooling
Except as noted below, the time of harvest to cooling requirement from May 1st through September 30th is:	5 Hours
When ambient air temperature at harvest is greater than 80°F, the time of harvest to cooling requirement is:	3 Hours
When harvest temperature is ~~between~~ 64°F and 66°F ~~from July 1st to August 31st~~, the time to cooling requirement is:	1 Hours
Harvest Control: ~~From July 1st through August 31st,~~ harvest is not allowed for 24 hours when harvest temp is above 66°F	

Risk Category 3 (New Version)

Condition at Harvest:	Time of Harvest to Cooling:
Except as noted below, the time of harvest to cooling is:	5 Hours
When **ambient air temperature** is 80.0°F or above:	3 Hours
When **harvest temperature** is 64.0°F to 66.0°F:	1 Hours
When **harvest temperature** is above 66.0°F:	Harvest is not allowed for 24 hours

Knowledge Check ☑

You are harvesting from a risk category 2 growing area on June 15th. Your ambient air temperature is 82.7F and your harvest temperature is 66.0F. How many hours do you have to cool?

a) 7 hours
b) 5 hours
c) 3 hours
d) I can't harvest for 24 hours

Condition at Harvest:	Time of Harvest to Cooling:
Except as noted below, the time of harvest to cooling requirement is:	7 Hours
When **ambient air temperature** is 85.0°F or above:	5 Hours
When **harvest temperature** is 66.0°F to 68.0°F:	3 Hours
When **harvest temperature** is above 68.0°F:	Harvest is not allowed for 24 hours

Knowledge Check ☑

You are harvesting from a risk category 2 growing area on June 15th. Your ambient air temperature is 82.7F and your harvest temperature is 66.0F. How many hours do you have to cool?

a) 7 hours
b) 5 hours
c) 3 hours
d) I can't harvest for 24 hours

Condition at Harvest:	Time of Harvest to Cooling:
Except as noted below, the time of harvest to cooling requirement is:	7 Hours
When **ambient air temperature** is 85.0°F or above:	5 Hours
When **harvest temperature** is 66.0°F to 68.0°F:	3 Hours
When **harvest temperature** is above 68.0°F:	Harvest is not allowed for 24 hours

WAC 246-282-006 *Vp* Control Plan §

Section 10(d) §:

- Requires a harvester who places oysters in a container, but does not remove them from the harvest site as part of their harvest to meet the following conditions:

a) Have a valid site certification for that site;

b) The oysters in the container or conveyance **must be returned to approximately the same tidal level or lower than where they were collected;** and

c) The oysters must be covered by the tide for a minimum of four hours before harvest can be completed.

Example:
You like to bag your shellstock for harvest the next day. Those bagged oysters must be placed back in approximately the same tidal elevation or lower than where they were collected and they have to be covered by the tide for at least 4 hours before harvesting.

WAC 246-282-006 *Vp* Control Plan

Section 11:

Requires the following harvest information to be taken and recorded:

- ✓ Time and location of harvest
- ✓ Air temperature; and
- ✓ Harvest temperature.

- ❑ A harvester or shellfish dealer using water temperature for the harvest temperature must take the water temperature at the <u>depth</u> of oysters unless another method is documented in their harvest plan.

ABC Shellfish
WA-0000-HA Harvest Record (HA) Year______

Harvest Date	Harvest Time	Harvest Area	Risk Category*	Area Open Y/N	Proper Tag Y/N	Air Temp at Time of Harvest*	Internal Tissue / Water Temp at Harvest	Cooling	
								Time	Temp.

SAMPLE

*For Growing Area Company Address/Phone

WAC 246-282-006 *Vp* Control Plan §

Section 12 §:

Requirement to take temperatures with either:

a) A **thin-tip digital thermometer** that is verified **monthly** using manufacturer specifications or with a method approved in a harvest plan; or

b) **A thermometer certified by the National Institute of Standards and Technology (NIST) with a manufacturer certificate that does not need to be verified monthly.**

What is a NIST certified thermometer?

- National Institute of Standards and Technology (NIST), *ensures it provides reliable measurements for critical applications like lab calibration, food safety, and pharmaceutical monitoring, and comes with a certificate detailing its corrections and uncertainties.*

Traceability: *Its accuracy is linked back to NIST's national standards through a documented calibration process.*
Certificate Included: *Comes with a document showing specific calibration points, correction factors, and measurement uncertainties.*
High Accuracy: *Used for verifying and calibrating other temperature-measuring devices (like RTDs, thermocouples).*
Specific Points: *Often calibrated at several critical temperature points relevant to its intended use (e.g., 0°C, 50°C, 100°C).*

WAC 246-282-006 *Vp* Control Plan §

Section 13:

- If using a thin-tip digital thermometer (not NIST), a thermometer verification log must be maintained with operational records.

Section 14 §:

- If using an NIST certified thermometer, the manufacturer certificate must be maintained with operational records.

ABC Shellfish
WA-0000-HA

Year_____

Vibrio Thermometer Verification Log (HA)

Date Calibrated	Name & Type of Thermometer being calibrated	Method OF CALIBRATION	Temperature after 2-minutes	Variance	Corrections Made

Knowledge Check ☑

What conditions must be met in order to containerize oysters prior to harvest? (Select all that apply)

a) Have a valid site certificate for that harvest site
b) Utilize verified containers
c) Oysters must be placed back at approximately the same tidal height or lower
d) The oysters must be covered by the tide for a minimum of 4 hours before harvest

Knowledge Check

What conditions must be met in order to containerize oysters prior to harvest? (Select all that apply)

a) **Have a valid site certificate for that harvest site**
b) Utilize verified containers
c) **Oysters must be placed back at approximately the same tidal height or lower**
d) **The oysters must be covered by the tide for a minimum of 4 hours before harvest**

Knowledge Check

How often does a thin-tip digital thermometer need to be verified?

a) Monthly
b) Weekly
c) Annually
d) Only need to maintain a certificate from the manufacturer

Knowledge Check

How often does a thin-tip digital thermometer need to be verified?

a) **Monthly**
b) Weekly
c) Annually
d) Only need to maintain a certificate from the manufacturer

WAC 246-282-006 *Vp* Control Plan §

Section 15:

- Cool oysters as quickly as possible, ensuring that the *Vp* growth is minimized and maximum time of harvest to cooling hours is not exceeded.

Section 16 §:

- If shellstock is beach wet stored or stored in a flow-through wet storage system in a growing area with a different risk category than where it was harvested, the **more stringent time of harvest to cooling** requirement must be used.

Section 17:

If cooling requirements are not met, one of the following corrections must be made:

a) Destroy oysters
b) Place oysters in an approved growing area for at least 14 days before harvesting again
c) Deliver oysters to a certified shucker-packer for shucking or PHP and attach and appropriately labeled harvest tag

WAC 246-282-006 *Vp* Control Plan §

Section 18 §:

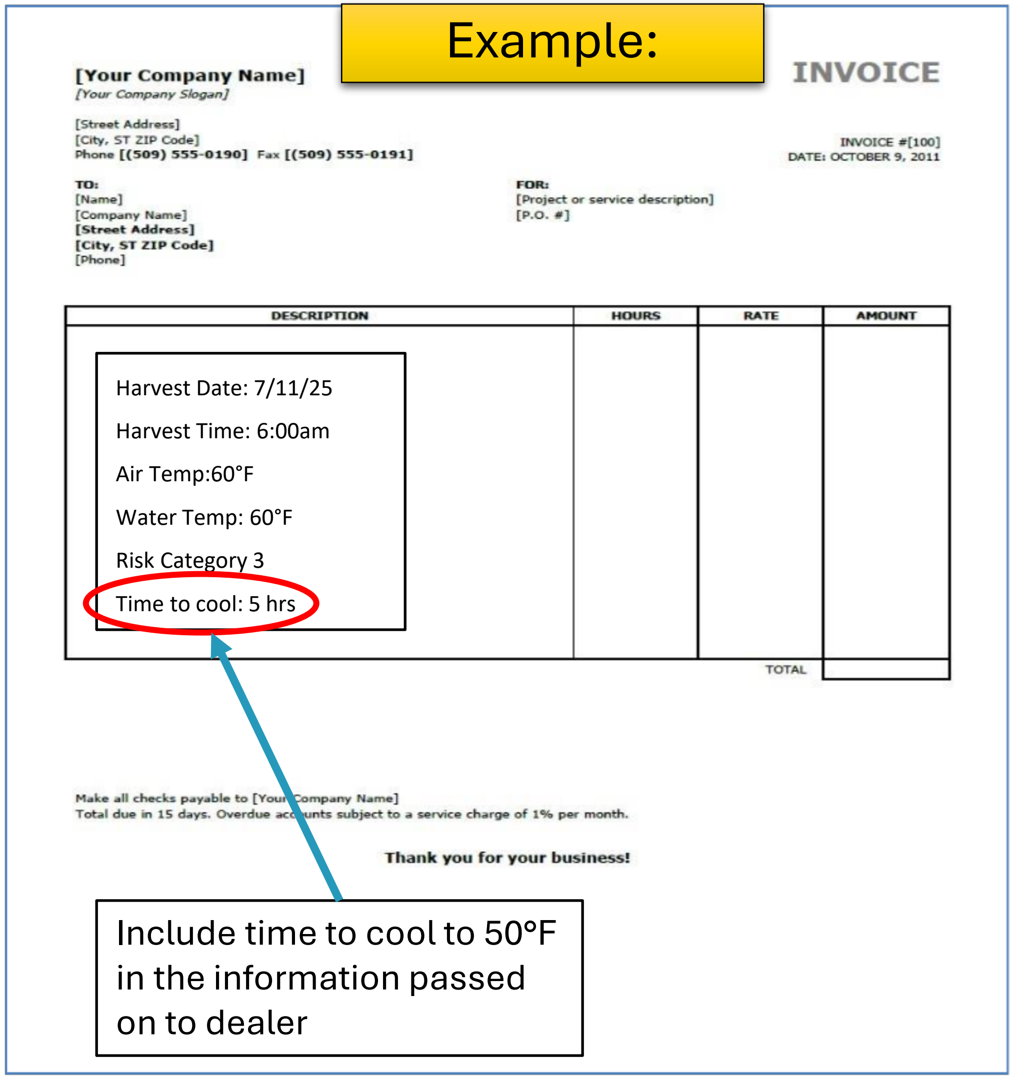
If ownership of oysters is transferred before the oysters are cooled, the harvester shall provide the following information to the receiving dealer:

a) Air and Harvest temperatures

b) Date, time, and name of the person or entity who received the oysters;

c) Growing area risk category for the harvested oysters; and

d) <u>The **total time of harvest to cooling for the oysters based on the growing area risk category.**</u> If shellstock is wet stored after purchase, the purchasing dealer should use the most stringent time to cooling



WAC 246-282-006 *Vp* Control Plan

Section 19:

- An initial *Vibrio parahaemolyticus* training must be completed prior to harvesting/shipping oysters during the control months.
- Complete refresher training withing one year following a rule revision or at least every 5 years
- Those responsible for the on-site management of harvest activities must be trained by either:
  - Harvester and dealer at their operation who complete a DOH approved training; or
  - DOH staff
- Record information of those who have received training in operational records

WAC 246-282-006- *Vp* Control Plan

Section 20:
An operation may request a waiver for specific requirements of this chapter. The waiver must:

- Be in writing;
- State the requirement requesting to be waived;
- Reason for the waiver; and
- Provide supporting information

Section 21:

- DOH may grant a waiver if it is consistent with the applicable standards and intent of this section AND protects public health.

Section 22:

- If approved, DOH must notify the operation in writing

Section 23:

- If denied, DOH must notify the operation in writing stating the reason of denial.

Vp Control Plan Changes Review!

- **Revised time to harvest**
  - To harvest during control months, plans must be submitted to DOH for review at least 14 days before harvest.

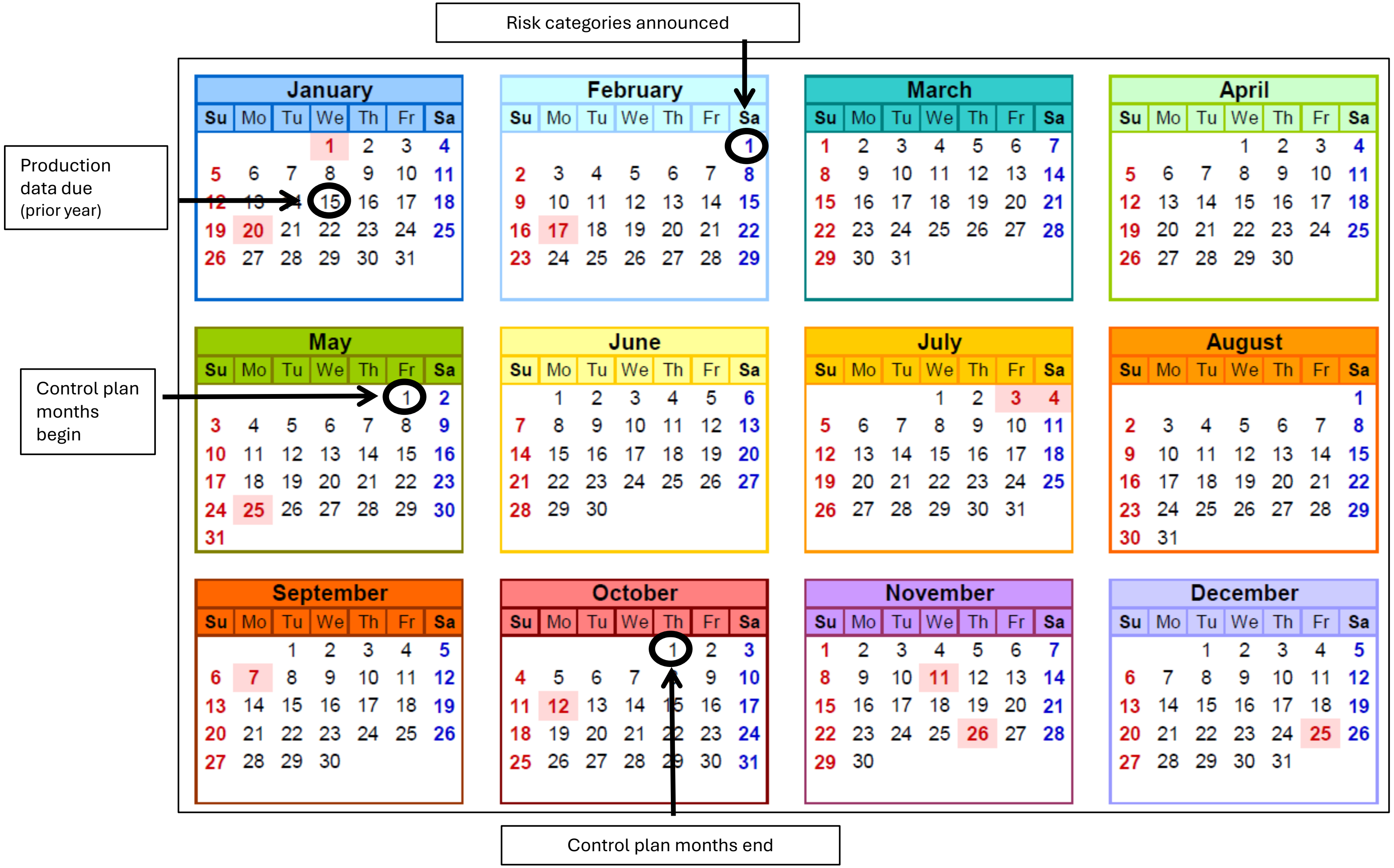
- **Changed the strictest time to cooling dates**
  - When applicable, the strictest time to cooling temps are now in effect May 1st to Sept 30th

- **Added requirement to store containerized oysters**
  - Oysters must be stored at approximately the same tidal height or lower than where they were collected

- **Changed thermometer requirements**
  - Digital thermometers are required, and if it is NIST certified, it does not need to be certified monthly

- **Added requirement for harvester if they are not cooling oysters**
  - Harvesters now need to include the time to cool for the risk category if not cooling to 50 °F

Timeline of Important Dates



Guidelines for Implementation

- Rules are in effect on January 15, 2026
- Delayed implementation to May 1, 2026
- Inspectors will be doing a lot of education during your renewal inspections coming up.
- 2-pager educational documents are available on our website

Questions?

Email: shellfish@doh.wa.gov

Please fill out the survey in the chat!

This will be used to make your certificate!

Washington State Department of
HEALTH