

**Final Small Business Economic Impact
Statement**

WAC 246-282-006
***Vibrio parahaemolyticus* Control Plan**

March 2008

Contents

Brief Description of the Rule.....	4
Small Business Economic Impact Statement Requirement.....	4
Industries Affected by the Rule	4
Costs of Complying with the Rule	5
Time-to-Temperature Control	5
Disproportionate Impact on Small Businesses	7
Mitigation Measures	7
Small Business Involvement in Rule Development	7
Jobs Created or Lost as a Result of the Rule.....	8

Final Small Business Impact Statement

WAC 246-282-006 *Vibrio parahaemolyticus* Control Plan

March 2008

Brief Description of the Rule

The *Vibrio parahaemolyticus* control plan outlined in the proposed Washington State Board of Health rule is intended to reduce the risk to the public of acquiring vibriosis from the consumption of raw and undercooked oysters. The rule is designed to do this by establishing shorter time-to-temperature controls during the months of most concern (May through September) in growing areas most likely to be associated with vibriosis. This rule also establishes additional time-to-temperature controls and potential growing area closure requirements in response to sporadic cases of vibriosis.

The proposed rule also imposes requirements for records that reflect the time of harvest, in addition to the date and the time the product is placed under temperature control. This record requirement is necessary to verify appropriate handling that limits pathogen growth in oysters intended for raw consumption.

In order for this rule to be properly implemented and practiced by the commercial oyster growers in Washington State, a training requirement for all who intend to commercially harvest raw oysters for human consumption is established by the proposed rule.

Finally, this rule requires changes in the Hazard Analysis Critical Control Point (HACCP) plans of licensed dealers. The HACCP plan is a food safety process control system that establishes a requirement for licensed harvesters to have a written *Vibrio parahaemolyticus* control plan and checklist to document compliance with the handling and record keeping requirements of this rule.

Small Business Economic Impact Statement Requirement

Yes, a Small business Economic Impact Statement (SBEIS) is required for this rule.

Industries Affected by the Rule

The shellfish fishing industry, North American Industry Classification System Code (NAICS Code) 114112, is the only industry affected by this rule.

Costs of Complying with the Rule

The largest ten percent of shellfish dealers consists of some shucker packer companies, some shellstock shipper companies, and one harvester company. They all share the same characteristic, regardless of license category, and that is that they all have multiple crews working either a very large farm or several to many farms throughout Washington's estuarine waters. The small companies on the other hand typically have one or two employees or just the owner doing the harvesting. The largest companies have from three to eight crews harvesting oysters each tide; each team leader maintains the harvest records for that team.

The costs of compliance for the proposed rule are associated with time-to-temperature control including affects on tribal harvest. There is no quantifiable cost attributed to sporadic illness response, record keeping, training, or modification of HACCP plans and creation of harvest checklists.

Time-to-Temperature Control:

The Department of Health (the department) assumes that companies will likely choose from two options to comply with the time-to-temperature requirements of the proposed rule: reduce harvest times to only those identified in the control plan for the geographic location and month of year, or submerge oysters for storage and later retrieval. The department further assumes that 50 percent of the approximately 200 licensed companies will choose to reduce harvest times and 50 percent will choose to use submerged harvest techniques. Under this assumption, the compliance costs for the proposed requirements are the opportunity costs of the hours that harvesting is not conducted beyond the specified time-to-temperature control. The costs estimated below are based on annual Puget Sound harvest figures for oysters. Willapa and Grays Harbor would see reduced harvest opportunities with a reduced time-to-temperature control from 12 to 10 hours for July and August only. However, by basing the calculation of costs on annual production rates for the more productive growing areas in Puget Sound, the reduced harvest opportunity for Willapa and Grays Harbor are adequately addressed. Although time-to-temperature control for May is reduced from 36 hours to 12 hours, there are no costs calculated for this change. The department assumes that dealers are meeting this harvest time currently in preparation for warmer weather months.

For those companies that elect to store oysters submerged for later retrieval as provided for in the proposed rule, the harvest curtailment would not apply. However, this method could probably only be employed by about half of the 200 companies identified above because of equipment requirements and location considerations. This means approximately 100 companies would be able to continue harvesting at normal capacity May through September with no lost revenue.

For those companies who elect to harvest within the time-to-temperature controls specified in the proposed rule, the department assumes available harvest time would be reduced in Puget Sound from 12 hours to 5 hours during the months of June and September, and from 12 hours to 4 hours in July and August. Assuming 28 days of harvest for each of these months, the result is a decrease in hours available for harvest of 392 hours total during June and

September, and 448 hours during July and August. Natural tidal cycles limit the amount of time harvesting can occur.

Harvesting can only occur during daylight hours and low tides. Because the low tide for a 24 hour cycle intermittently occurs during the night when harvesting cannot be done, this analysis does not assume a direct reduction in harvest opportunity from 12 hours for all four months of control. (Based on the hours calculated above, direct reductions would be 58% in June and September, and 67% in July and August). Instead, harvest opportunity reductions are calculated based on projected tide cycles for 2008 taking into account the time of day for each low tide. This equates to a 29% reduction in available harvest time for June and September, and a 33% reduction in available harvest time for July and August. Because tide cycles change yearly, these changes will vary from year to year.

The department assumes that 65% of the 31,000,000 pounds of shellfish harvested annually in Washington is oysters harvested from Puget Sound, including those intended for raw consumption (approximately 20,150,000 pounds). The department also assumes equal distribution of harvested oysters across the twelve months (1,679,167 pounds monthly). The total volume of oysters normally harvested during June through September (6,716,668) equates to a retail value of \$4,365,834.00 (6,716,668 divided by 5 pounds per dozen, multiplied by \$3.25 per dozen). This averages to \$1,091,459.00 per month.

Applying the 29% reduction in available harvest time for June and September results in an estimated reduced income of \$316,523.00 (\$1,091,459.00 multiplied by .50 of companies, multiplied by 2 months, multiplied by 0.29). Applying the 33% reduction in available harvest time for July and August results in an estimated reduced income of \$360,181.00 (\$1,091,459.00 multiplied by .50 of companies, multiplied by 2 months, multiplied by 0.33). The total estimated annual reduction is \$676,704.00

Based on the assumptions identified above, the total estimated cost of compliance for the proposed time-to-temperature control is \$676,704.00. However, actual costs are expected to be different due to the following factors: Additional costs for wages associated with transporting oysters after being submerged, reduced costs associated with oysters that don't meet time-to-temperature control that are sold under a "for cook only" label, reduced costs associated with the practice of icing oysters to achieve temperature control while continuing to harvest during the entire low tide, and reduced costs associated with the fact that there is not a strict one-to-one relationship between available harvest time and income because such factors as weather are being discounted. With these variables, the department assumes the cost estimated in this analysis for reduced time-to-temperature control requirements is overestimated.

There are harvesters for whom the proposed time-to-temperature control would impose a unique cost. Tribal harvesters, whose growing areas are often remote and difficult to access, might have to forego harvest in some instances with a resulting loss in revenue of \$110.00 to \$220.00 per harvest (\$2.20 per dozen oysters harvested, multiplied by a typical daily harvest of 50 to 100 dozen oysters per harvester). There are 14 tribes that harvest oysters in Washington State with approximately 12 harvesters per tribe for a total of 168 harvesters. A

second concern of tribal harvesters is the lack of security at some of their growing areas, which are also public beaches or state parks. If they were forced to submerge their days' harvest of oysters prior to delivering them to the buyer, they could lose some to all of their oysters to theft which, again, would amount to \$110.00 to \$220.00 per harvest for each harvester. The estimated cost of this requirement is based on the percentage of licensed companies that did not harvest oysters for raw consumption in 2007; 10 percent. The estimated cost of this requirement to tribal harvesters ranges from \$31,790.00 (\$110.00 multiplied by 17 harvesters multiplied by 17 weeks) to \$63,580.00 (\$220.00 multiplied by 17 harvesters multiplied by 17 weeks).

The estimated range of cost associated with reduced time-to-temperature control, including costs for tribal harvesters, is from \$679,883.00 to \$740,284.00.

Disproportionate Impact on Small Businesses

To calculate the impact of the proposed regulations for small businesses, the department assumes that the size of a business is determined by number of employees. Of the 200 companies affected by this rule, 3 are considered large with approximately 50 employees each for a total of 150 employees for large businesses, and 197 are considered small businesses with an average of 2 employees each for a total of 394.

The department has determined that this rule does not impose a disproportionate impact on small businesses compared to large businesses.

Time-to-Temperature Control:

The total estimated annual reduction of income associated with this requirement is at most \$740,284.00. Of the oysters produced in Washington State, approximately 67% are produced by large businesses and approximately 33% are from small businesses. Thus, the loss to large and small business is apportioned according to these percentages. This equates to a loss for large businesses of \$495,990.00 equaling \$3,307.00 per employee. For small business, the total cost is \$244,294.00 equaling \$620.00 per employee. This indicates that there is no disproportionate impact to small businesses on a per employee basis.

Mitigation Measures

Because the department has determined that the rule does not impose a disproportionate impact on small businesses, no mitigation measures are necessary.

Small business Involvement in Rule Development

DOH staff worked closely with industry and interested constituents such as the Northwest Indian Fisheries Commission, Point No-Point Treaty Council, the U.S. Food and Drug Administration, individual tribes, and the Pacific Coast Shellfish Growers Association, to minimize the burden of

this rule. The Office of Shellfish and Water Protection had five meetings with a *Vibrio* Advisory Group selected from among the interested parties listed above. Of the dozen members of the *Vibrio* Advisory Group that represented oyster harvester and dealers, one represented Washington's largest dealer and the remainder represented companies with fewer than 50 employees.

Jobs Created or Lost as a Result of the Rule

The proposed rule is likely to result in temporary unemployment as a result of harvest area closures for oysters intended for raw consumption due to sporadic cases of *Vibrio parahaemolyticus*-associated illness. This job loss is temporary during the summer months when the risk of vibrio is greatest. Once the summer has ended and the increased risk of vibrio has passed, employees are rehired. The largest companies, the 35 that make up the top 10%, have historically kept as many people employed as possible, assigning them to farmwork on the shellfish beds and postponed repair, maintenance, and construction tasks around the company's physical facilities. However, temporary unemployment will remain a hazard of employment in the oyster industry.