



**WASHINGTON STATE DEPARTMENT OF HEALTH  
WASHINGTON STATE SHELLFISH TREATY TRIBES  
WASHINGTON STATE DEPARTMENT OF FISH AND WILDLIFE  
WASHINGTON STATE DEPARTMENT OF AGRICULTURE**

**STRATEGY FOR PREVENTING CONSUMER EXPOSURE TO  
DOMOIC ACID FROM COASTAL DUNGENESS CRAB**

In 1992, the Food and Drug Administration (FDA) adopted a policy directed at preventing consumer exposure to domoic acid from commercial Dungeness crab and since codified the policy in the Fish and Fishery Products Hazards and Controls Guidance (<http://www.fda.gov/downloads/Food/GuidanceRegulation/UCM251970.pdf>). The FDA encouraged states to implement programs to detect domoic acid in crab and to prevent consumer exposure to hazardous levels of domoic acid since they will take regulatory action on any Dungeness crab in interstate commerce found to contain 30 ppm or more domoic acid in cooked viscera.

In keeping with FDA policy, the Departments of Agriculture (WSDA), Fish and Wildlife (WDFW), and Health (DOH) and the Washington State Shellfish Treaty Tribes developed and are continuing to follow the strategy for dealing with the presence of domoic acid in crab. The strategy requires the active participation and cooperation of all involved agencies, tribes, and the industry to assure optimal public health protection and to maximize harvest opportunities.

Specific elements of the strategy are as follows:

**MONITORING PROGRAM**

Due to the sporadic nature of marine biotoxin episodes, a sampling strategy based on geographic zones was developed to protect consumers from high levels of biotoxin in crab while minimizing disruption to commercial and recreational harvest opportunities. Such a plan allows for closure of defined areas if necessary, rather than the entire fishery. Five (5) distinct geographic zones, three (3) coastal areas and two (2) coastal bays, Willapa Bay and Grays Harbor have been delineated in order to allow effective closure and reopening in the event domoic acid levels reach or exceed closure levels. See Harvest Zone Map on next page.

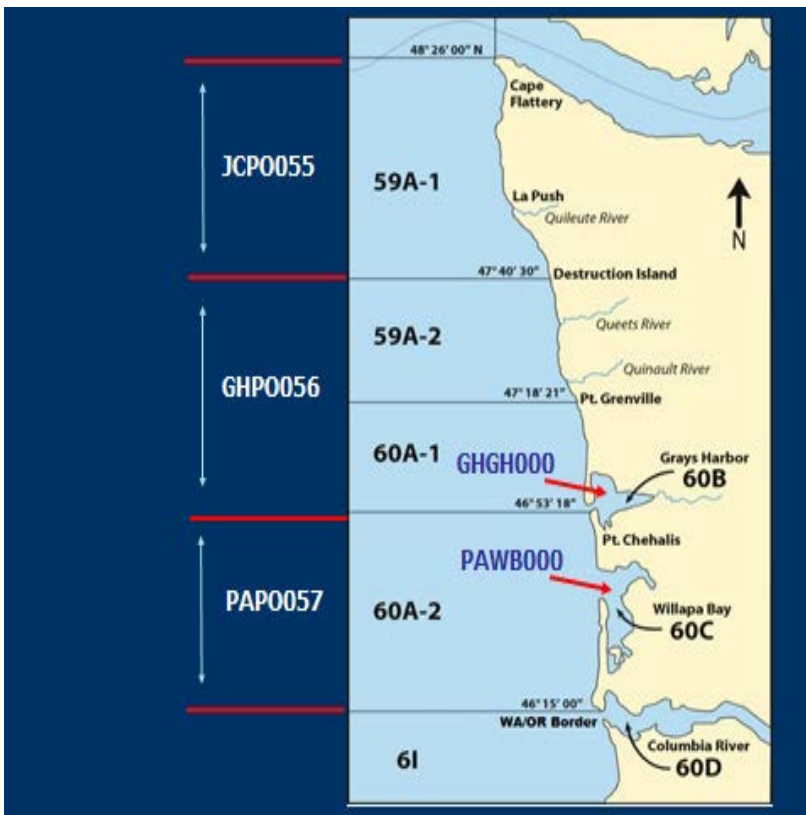
This plan requires the development of procedures to assure crab samples collected by WDFW, Tribes and commercial Dungeness crab harvesters and buyers/processors can be identified as coming from a described zone. During the crab harvest season, the crab-sampling frequency is monthly or as directed by DOH. If there is an increase in domoic acid in razor clams, more frequent sampling of Dungeness crab may be required. DOH will notify the appropriate samplers if it becomes necessary to increase the frequency of sampling.

**Coastal Zones**

Coastal Zones and site ID's to be included in the routine monitoring program are:

- WA/OR Border to Point Chehalis (PAPO057)
- Point Chehalis to Destruction Island (GHPO056)
- Destruction Island to US/Canada Border (JCPO055)
- Grays Harbor (GHGH000)
- Willapa Bay (PAWB000)

**Harvest Zone Map**



**Inside Waters to include the Strait of Juan de Fuca and Puget Sound**

In the event that shellfish samples indicate a significant domoic acid bloom event inside the Strait of Juan de Fuca or Puget Sound, DOH may require samples of crab from the impacted area. DOH will notify the WSDA, WDFW, and any Washington State Treaty Tribe in the impacted area and request crab samples for testing. Should the test results show elevated levels of domoic acid, the same procedures used to monitor the coastal crab fishery will be implemented for the inside waters crab fishery, including sample size and frequency, closure levels, reopening levels, crab in the market place and alternatives to closure.



*One crab sample set consists of six (6) crab viscera individually tested from six (6) whole cooked Dungeness crabs per harvest zone.*

Viscera and meat samples will be collected from all crab from each crab sample set. Viscera samples will be tested first and meat samples will be tested if evisceration orders are being considered.

If the toxin levels in the viscera of one (1) or more crabs in a single sample set of six (6) crab is equal to or exceeds 30 ppm, DOH will issue a closure announcement of the commercial crab fishery in that zone. Additional advisories on consumption of crab may be issued as warranted based on the biotoxin levels detected through the monitoring program. If any single crab sample of **meat** shows domoic acid levels of 20 ppm or higher, the zone will be closed.

Lack of adequate crab samples in a zone, in the face of elevated domoic acid in adjacent zones or in other species, may also result in the closure of that zone until adequate information is gathered to determine the zone is safe to be reopened.

Other environmental indices, such as phytoplankton data, high levels in other species or high levels in adjacent zones may trigger extra sampling in a zone or all zones.

The WDFW will issue an official closure order when a zone or the entire coast needs to be closed.

### **OPENING-REOPENING CRITERIA**

Any decision with regard to opening or reopening of a zone will be based on the laboratory analysis of six (6) crab viscera from six (6) whole cooked Dungeness crabs collected from that zone.

Opening of a zone at the beginning of the crab season will require one (1) crab sample set, with all six (6) crab showing domoic acid levels below 30 ppm in the viscera. If razor clam samples show elevated levels of 20 ppm or higher, opening a crab zone will require two (2) consecutive crab sample sets that are collected not less than seven (7) days apart, with all six (6) crab in each set testing below 30 ppm in the viscera.

Reopening a zone that has been closed due to biotoxin test results will require two (2) consecutive crab sample sets, collected not less than seven (7) days apart, with all six (6) crab in each set testing below 30 ppm in the viscera.

### **CRAB IN THE MARKET PLACE**

In keeping with the Fish and Fishery Products Hazards and Controls Guidance specific lots of crab known to contain domoic acid levels of 30 ppm or greater in the viscera will be embargoed. Such crab must be either eviscerated prior to sale or destroyed. The embargoed crab meat must be sampled prior to sale or consumption. The sample of crab meat must have a domoic acid level of less than 20 ppm



before any crabs can be eviscerated. Crab meat found with domoic acid levels of 20 ppm or higher cannot be eviscerated and sold. All such lots of crab meat must be destroyed.

### **ALTERNATIVE TO CLOSURE**

Evisceration of crab from zones showing elevated levels of domoic acid in crab viscera may be an alternative to closure. Such an alternative would require careful consideration of whether adequate public health protection could be achieved. Tight controls on harvest, landing and processing of crab from the zones would be necessary before evisceration would be approved as a method of biotoxin control. WDFW or WSDA would have the lead role(s) in implementing such controls and this process must be integrated into the processor's HACCP plan, to include record-keeping methods that ensure crab lots are identified by harvest zone.

### **COMMUNICATIONS**

In the event where closure of a zone(s) is required, DOH will notify the four coastal tribes; Quinault Indian Nation, Quileute Indian Tribe, Hoh Tribe and the Makah Tribe; WDFW; WSDA; and the FDA.

Department of Agriculture will notify Oregon Department of Agriculture and all commercial crab processors, and will, in turn, request crab processors to notify crab harvesters.

The United States Food and Drug Administration will notify British Columbia and Oregon counterparts by broadcast email.

Each tribe will notify their license holders.

The Department of Fish and Wildlife will notify all coastal Dungeness crab license holders and Oregon and California Department of Fish and Wildlife.