Frequently Asked Questions List:
Harmful Algal Blooms and California Fisheries

California Ocean Science Trust, July 2016

In response to the 2015-2016 harmful algal bloom and subsequent California Dungeness crab and rock crab fishery closures due to elevated levels of domoic acid, the California Ocean Protection Council (OPC) and the Interagency Marine HAB Task Force asked California Ocean Science Trust to develop a frequently asked questions (FAQ) document that addresses questions focused on:

I. HABs and seafood toxin monitoring efforts in California

II. Domoic acid and California fisheries

III. Human health and seafood safety concerns

IV. California's fishery and seafood toxin management

Questions were submitted to Ocean Science Trust by the HAB Task Force, along with input from the Dungeness Crab Task Force Executive Committee, and the office of California Senator Mike McGuire. Many of these questions originated during public comment, emails, or calls from stakeholders to agency or legislative staff. Visit here[1] for the full list of submitted question.

The questions on the following pages will be included in the FAQ. The goal of the FAQ is to provide clarity for members of the fishing industry, consumers, NGOs, California state agencies and Legislature on the State's current practices (through July 2016) in regards to harmful algal bloom monitoring, management, and seafood toxin sampling and testing protocols.

The FAQ will be made available on the Ocean Science Trust webpage[2] in early August 2016.

[1] http://www.oceansciencetrust.org/wp-content/uploads/2016/07/Full-List-of-Submitted-questions-HABs-and-fisheries-2016.pdf

[2] http://www.oceansciencetrust.org/project/harmful-algal-blooms-and-california-fisheries/

I. Harmful Algal Bloom and Biotoxin Monitoring Efforts in California

- How are harmful algal blooms and associated biotoxins being monitored along the west coast?
- Where can HAB monitoring and active bloom information be found?
- Are HAB events increasing in frequency? Are there links between climate change and HAB events?
- Can we predict future HAB events and impacts to fisheries?

II. Domoic acid and California Fisheries

- What is the history of domoic acid toxicity in seafood in the U.S.?
- What are the current (2016) domoic acid action levels in California?
- What is the scientific rationale behind the action levels for domoic acid toxicity in seafood?
- What are the current (2015/16 season) criteria for opening and closing the Dungeness crab fishery based on the action levels?
- Where can information be found on California's current domoic acid crab monitoring plan? What plan do other west coast states adhere to?
- Where are the domoic acid biotoxin monitoring sites in California?
    - How were the Dungeness crab sites selected?
    - How frequently are crab biotoxin sites sampled?
    - What determines how frequently sampling occurs?
    - How is spacing of sites considered?
    - How are samples collected within a site (distance, including buffer zones)? Does sampling control for potential differences in domoic acid levels between male and female Dungeness crabs?
- How is domoic acid detected in seafood samples? How are the samples processed during testing? (i.e., are whole crabs homogenized in seawater or freshwater? Are viscera tested separately from crab tissue?)
- How are government agencies responding to the 2015/16 shellfishery closures in California (e.g., Dungeness and rock crab, razor clam)?

III. Health and Seafood Safety Concerns

- After consumption of crab meat, is toxin accumulation additive if multiple crabs are eaten? In other words, if toxin levels are below the threshold of concern, but still >0 PPM, how many crabs or pounds of crab meat are safe to eat for an average adult, a child, or an elderly person?
- What are the long-term effects of low levels of domoic acid exposure?

IV. California's Fishery and Seafood Toxin Management

- What agency leads California's seafood biotoxin monitoring and sampling programs, and how are these programs funded?
- What are the roles of the various California agencies involved in HAB response, monitoring, and fisheries management?
- How do HAB and fishery management measures in California, specifically for domoic acid and Dungeness crab, link to what is being done in Oregon and Washington?
- How does Dungeness crab management differ between the recreational and commercial sector, and what is the rationale for this difference?
- What do differences in management between the commercial and recreational sectors mean for opening and closing of each sector? (e.g., why did the commercial sector have to wait while the sport sector was opened?)
- When will testing for the 2016-17 season commence for Dungeness crab?
- Why was a two-test system required most of the time and a one test system at other times? Describe CDFW's rationale for opening the District 10 line without the two consecutive clean tests required elsewhere.
- What's next for California? How can interested individuals get involved?