



Allison Castellan - NOAA Federal <allison.castellan@noaa.gov>

Fwd: CDAO Comments - Non Source Point Pollutuons in Oregon.

1 message

Joelle Gore - NOAA Federal <joelle.gore@noaa.gov>

Wed, Mar 5, 2014 at 10:20 PM

To: Allison Castellan - NOAA Federal <allison.castellan@noaa.gov>, Lisa Warr - NOAA Federal <lisa.s.warr@noaa.gov>

----- Forwarded message -----

[REDACTED]
Date: Wed, Mar 5, 2014 at 7:01 PM

Subject: CDAO Comments - Non Source Point Pollutuons in Oregon.

To: joelle.gore@noaa.gov, [REDACTED]

Joelle Gore, Acting Chief, Coastal Programs Division (N/ORM3), Office of Ocean and Coastal Resource Management, NOS, NOAA, 1305 East-West Highway, Silver Spring, Maryland, 20910, phone (301) 713-3155, x177, or by email joelle.gore@noaa.gov.

Dear Joelle, [REDACTED] President of the Clam Diggers Association of Oregon Here.

The best way I can comment about Oregon's non-source point pollution program is to submit comments describing the Clam Diggers Association of Oregon's experiences with State Agencies to encourage the development and implementation of an Invertebrate Species Management Program. Recommend suggestions to improve harvest regulations for the taking of clam and crabs from Oregon's coastal waters. Establish a sewage spill

notification hotline warning recreational enthusiasts of sewage spills into Oregon's state waters and our discovery of the State's collective failure to test marine organisms and sediment for toxic contamination in Coos Bay.

Our comments will be in two parts. The first will be from the historical perspective and the second will be a narrative of our current initiative to report the occurrence of raw sewage spills into Oregon's State Waters and document the contamination of Oregon's Bays by requesting information from Oregon's State Agencies that identify and document both source point and non-source point contaminants that pose a threat to the marine environment and therefore to the recreational enthusiast who harvest marine crustaceans and shellfish.

Our recommendations follow:

1. We recommend funding only if the State of Oregon implements a comprehensive Statewide Invertebrate Species Management Plan. The plan must include provisions for regularly scheduled testing of both freshwater and saltwater invertebrates for contaminants. The plan should also include provisions for zero tolerance if contaminants raise above the normal baseline levels common to the local environment for all compounds both natural occurring and manmade. The Invertebrate

Species Management Program must contain compulsory binding provisions to ensure that those State agencies entrusted to run the program cannot violate the public trust. We cannot allow the State of Oregon to continue to violate the public trust by running pollution control programs into the ground. Thank you, [REDACTED]. Call me if you need additional information, [REDACTED].

Part One

My interest in the issues associated with recreational clam digging began with a successful petition to ODFW convincing them of the need for the Shellfish Hotline.

I began teaching people how to dig clams at the request of my friends and the Driftwood Library at Lincoln City as part of their Coastal Encounters Program each spring. This followed with the publication of my books, Oregon's Razor Clams in 2004, my second, third and fourth books, Oregon's Clams, Oregon's Crabs and Oregon's Clams and Crabs. The success of the books generated a compelling interest in the management of clams and crabs and the Oregon's Clam Diggers Association was formed in 2006.

Buoyed and encouraged by friends and association members we formulated an agenda consisting of

harvest regulation improvements and a recommendation for life cycle studies of bay clams in Coos Bay in connection of the baseline population assessment underway in Coos Bay at that time. The life cycle study of bay clams in Coos Bay would have answered many of the unanswered questions we have about various populations of clams that died suddenly. In fact the information collected from life cycle study or an invertebrate species management plan would have proven useful in determining the development of rising levels of contaminants in the clams, oysters, mussels and crabs in Coos Bay from both non source point and source point active pollution agents.

The Clam Diggers Association of Oregon has advocated for the elimination of discharging treated effluent into State waters because of the role treated effluent contributes to the development of so called Dead Zones. Rather than providing positive comments our criticism of the practice is met with hypoxia is a natural occurring event in nature. The problem is the practice of dumping treated effluent into Oregon's State waters is not a natural occurring event. There is privately funded study, "Medford sewage plant hurts the Rogue River, study finds" as reported on February 13, 2013 by the Associated Press The Associated Press that supports our argument about the effects of discharging treated effluent into State waters. The fact that State and Federal guidelines which support this type of pollution

may be alright with those who wrote them but the fact remains that dumping tons and tons of treated fertilizer into our river, bays and oceans 24/7 is having catastrophic effects.

There are three instances that really stand out and need to be addressed. The first occurred when Brandon William traveled to Rocky Point to rake a limit of littleneck clams only to be greeted by thousands of littleneck clams lying on the surface dying. The amazing event was reported to Scott Groth in the ODFW Charleston office. The second event occurred at the Seal Rock headland located between Newport and Waldport. I had dug a limit of razor clams just south of the rocky structure associated with the headland and went my favorite rocky outcrop to harvest mussels; however as I approached the rocks I could see that something had blistered the marine growth on all of the visible rocky structure associated with the headland as far as the eye could see. I reported this unusual occurrence to the one of the biologist at the Newport office. I believe it was Mitch Vance. The third event was the discharge of tons of bark dust generated from the log debarker operated by the Port of Newport. Fine grained bark dust to large chunks of bark covered large sections of the bay suffocating and killing tens of thousands of clams while turning huge tracks of the tidal flats into quagmires of lifeless sludge. I reported this to Tami Wagner, but nothing ever came of my complaint or any of the others we have

reported.

We put a lot of thought and effort in writing our agenda. When our agenda was ready we requested 15 to 20 minutes of the ODFW Commission's time to present our agenda complete with a power point slide presentation to the ODFW Commission.

Commission Chairperson Marla Rae responded to our request saying, "Absolutely Not!" She followed her initial refusal with an offer stating that the ODFW Commission would allow us three minutes to present our agenda but without any power point slide presentation. We declined her offer.

We called the office of the Director of ODFW, Roy Elicker. By golly our call was put through to him. We explained our desire to present the agenda of the Clam Diggers Association to him. He said that he would be happy to meet with us. I responded and expressed my willingness to travel to Salem to meet with him. He declined stating that he visited Newport once a month and his office would contact us to schedule a meeting. Needless to say that meeting never took place and his office failed to return our calls.

We requested a meeting with the new Program Manager, Leslee Parr, for Oregon's Shellfish Program. Well she failed to fulfill her many commitments to meet with us.

Finally we mailed a copy of our agenda to all the appropriate parties within ODFW. We received a written response stating that our suggestions and recommendations did not meet the provisions of the New Clam Management Program. We asked ODFW biologists for a copy of the new clam management program, only to be told there was NONE.

During this entire period we appealed to the Govern numerous times asking him to intervene with ODFW on our behalf on this as well as other issues. Well we never heard from him either.

On day I cornered one of the ODFW shellfish biologist at the local Fred Meyer store and asked him directly what was ODFW's problem? His response was and I quote, "What do you expect, Bill, when you write the Governor's office complaining about our management policies."

He was referring to our complaint to the State Police, ODFW and the Governor's office about commercial clam divers poaching clams in the South Slough of Coos Bay. At that time we thought the clams were being taken for the local bait market; however today, we believe they were taking clams for shipment to the Asian markets. We also believe that the current import ban on shellfish by the Chinese because the clams they are importing from the Pacific Northwest are contaminated is the direct result of the illegal

intrastate exportation of bay clams dug from the contaminated substrate in Coos Bay and then trucked to Washington State for export to the Asian Markets..

We complained directly to an Oregon State Police Officer in the area while the poaching was ongoing and to the Oregon State Police, ODFW, ODA and the Governor's office about this incident and about black market clams in general.

These State agencies did very little in response to our complaints. I did receive a letter from the head of the Marine Resources Program basically stating that we did not know what we were talking about. All the Oregon State Police office had to do was respond to our complaint and the poachers would have been caught.

Our relationship or lack of one with State agencies has not stopped us from trying to improve the relationship between those who take advantage of wonderful bounty of marine resources in our bays and those resources

Part Two.

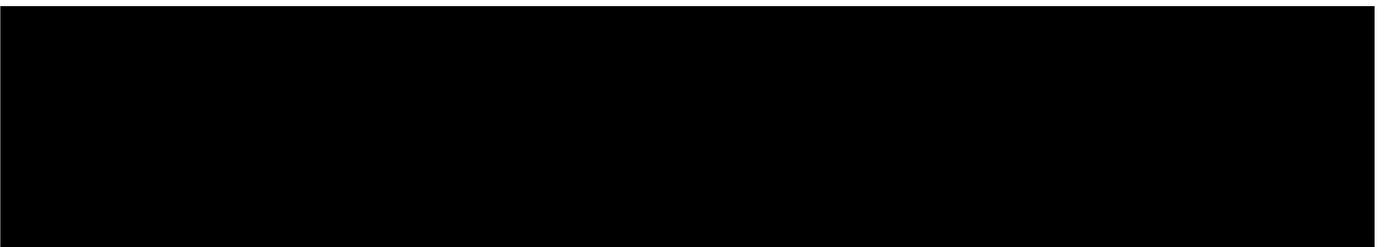
My post to our blog after the State agencies fail in their commitment to post notification of sewage spills into State waters. The post were made after the State agencies meeting they agreed to post sewage spills to a web based

hotline.

Oregon State Agencies failed to deliver on their commitment to notify the public when sewage spills occur in Oregon's State Waters. This is not the first time they have failed to keep their word. Their failure is not an isolated occurrence. Because of their failure we cannot trust anything they say or deal with them in good faith.

Oregon's Coastal Economy depends on the public's faith in clean water in a safe environment. A promise the State has failed to keep.

Right Now!!! The public does not know if the water their children are playing in, swimming in and catching fish and crabs or digging clams in is safe to be in. There is nothing more disgusting than discovering that the clams you just dug were taken from a bay with an active Sewage Spill.



Dear [REDACTED],

What is the current status of Oregon sewage spill notification process on the ODFW shellfish hotline? You last correspondence said you would notify us for

a September meeting date. Can you provide us with copies of the documents from the September meeting?

Best Regards, [REDACTED]

[REDACTED]

Post by Clam Diggers Association on Dec 1, 2013 at 7:27am

[REDACTED]

I do not have anything I can tell you at this time. I hope to give everyone an update in the not too distant future.

[REDACTED]

This was the end of our communication with the ODA as shortly thereafter, Charles Leonard

retired. When Charles Leonard retired so did the State Agencies commitment to post sewage spills on the web based hotline.

Our letter to the DEQ and others

DEQ



Re: Coos Bay Charleston Boat Yard

Dear Mr. Anderson,

In the original cleanup agreement between EPA and the State of Oregon it was agreed that part of the process for cleanup would be public involvement. It is also clear the Port was negligent in the original cleanup and testing at the Charleston Boat Yard sites. Because of this negligence, the Clam Diggers Association of Oregon is requesting the following:

- 1. DEQ notify EPA that Oregon International Port of Coos Bay was non-compliant with the cleanup agreement for the Charleston Boat Yard.*
- 2. DEQ notify Oregon State Marine Board that Oregon International Port of Coos Bay was non-compliant with the cleanup agreement for the*

Charleston Boat Yard. The Port has recently received clean and green certification from the Oregon State Marine Board and should have failed because of the non-compliance. The recent test results of the cleanup areas are also reasons for not receiving the clean and green certification. I am sure honestly is also a requirement.

3. DEQ media release that explains the contaminate situation at the Charleston Boat Yard. This release should include a map that describes the location near clam beds where the public harvest clams. This release should include the following statement "composite testing of contaminants have not been established for human safety particularly for children or pregnant women" and "should avoid eating clams from this area of the bay where contaminants are present."

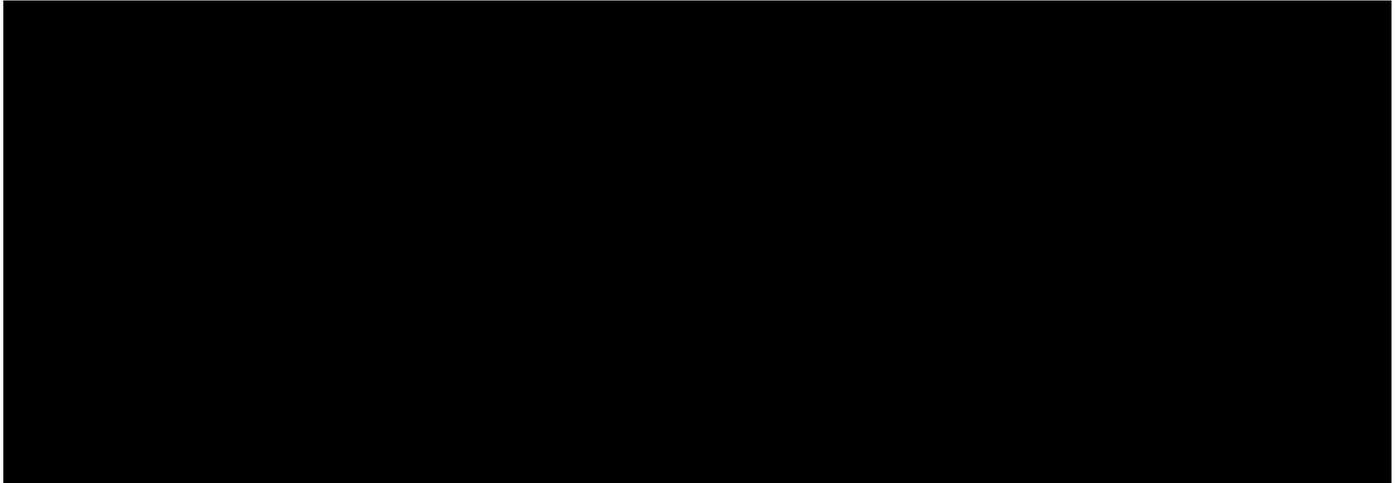
4. Public meeting and a comment period for the Charleston Boat Yard ongoing cleanup.

5. Develop an invertebrate species plan for the State of Oregon that protects Oregon public resources.

6. Require Port to conduct annual clam tissue contaminate testing in the clam beds from the Charleston bridge to cleanup areas until the clams test negative for any contaminants for five years straight.

7. Require the Port to post signs near the clam beds that state this area is near a hazardous cleanup area "pregnant women and children should not consume clams from this area of the bay."

Sincerely,



The following are comments we posted to the website blog of the Clam Diggers Association Of Oregon.

WARNING DO NOT EAT THE CLAMS FROM COOS BAY!!!

The decision to post warnings about the presence of toxic shellfish in Oregon's Industrialized Bays, Coos Bay, Yaquina Bay and Tillamook was made because the State of Oregon's failure to test for the numerous toxins that contaminate the shellfish in our industrialized bays. The situation is so serious that we believe that level of contamination is a threat to the health and welfare of the people who consume the shellfish taken from those bays. The contamination is the direct result of the State refusing to implement an Invertebrate species management plan.

Tributyltin can enter the body through inhalation of contaminated air, ingestion of contaminated food or through contact with the skin.

Metabolism in mammals is rapid: metabolites are detectable in blood within 3 hours of TBT administration. TBT is a substrate for mixed-function oxidases in vitro, but these enzymes are inhibited by TBT in vitro at very high concentrations. Metabolism occurs in lower organisms but is slower, particularly in molluscs. The capacity for bioaccumulation is therefore much greater than in mammals. Excretion of tributyltin is via the bile rather than the urine.

Tributyltin can be transferred across the blood-brain barrier and from the placenta to the fetus.

Oregon needs an Invertebrate Species Plan that includes testing for contaminants in crustaceans and shellfish. Contact your State Representative with a request to restore regular testing of clams, mussels, oysters and red rock and Dungeness crabs for contaminants in Coos Bay, Yaquina Bay and Tillamook Bay.

WARNING!!! DO NOT EAT THE CLAMS FROM COOS BAY!!!

The bay clams dug from many areas of Coos Bay are contaminated with host of contaminants that cause breast cancer, lung cancer, testicular cancer. The medical problems associated with some these

contaminants are genetically generational and passed on to multiple generations of your descendants. Expectant mothers, nursing mothers and children should not consume clams taken from Coos Bay. Adult clam diggers should avoid the long term consumption of contaminated clams taken from Coos Bay.

OUR RECOMMENDATIONS:

Do not eat the clams or mussels taken from Coos Bay. That being said:

Do not eat softshell clams taken from Coos Bay.

Do not eat either the clams or mussels taken from the docks and piling anywhere from Coos Bay

If you dig clams from Coos Bay only dig them from tidal areas north of the Charleston Bridge to a line crossing the bay above Clam Island.

If you eat the clams take from Coos Bay discard everything except the neck.

THE PROBLEMS:

Contaminated Shellfish!!!

Insufficient testing!

No transparency: the State fails to notify the public of the frequency and results of shellfish tested for toxic and carcinogenic substances.

The State violated the public safety by failing to adequately warn pregnant women and children to the danger of consuming contaminated shellfish taken from Coos Bay.

The State refuses to notify the public of sewage spills into Oregon's Bays.

The State does not understand and understates the threat to the public safety posed by the contaminated shellfish in Coos Bay. The ODFW representatives in the Charleston office have stated, "The clams in Coos Bay are safe to eat", or "Coos Bay is the cleanest bay in Oregon to dig clams".

Coos Bay is home to multiple EPA Super Fund sites. The State has violated their agreement with the EPA to monitor the Super Fund sites that were supposedly clean up.

ACTION: view our request to the Governor.
Response to date: NONE.

We have continuously requested Crab and Clam Management plans. Response to date: Refused! Refused! Refused!

We have continuously requested an Invertebrate Species Management Plan. Refused! Refused! Refused!

CONCLUSION: in the form of question. Has Coos Bay suffered the fate as the Columbia River? The fish and crayfish of the Columbia River are too contaminated with toxins to eat. How contaminated are the red rock and Dungeness crabs in Coos Bay? How contaminated are the fish in Coos Bay? How contaminated is the food chain for all species in Coos Bay?

Dear Governor, Has Coos Bay suffered the fate as the Columbia River? The fish and crayfish of the Columbia River are too contaminated with toxins to eat. How contaminated are the red rock and Dungeness crabs in Coos Bay? How contaminated are the fish in Coos Bay? How contaminated is the food chain for all species in Coos Bay?

In response to our inquiries a Oregon Health Authority official opinioned, "Expectant mothers, nursing mothers and persons under 100 pounds should not consume clams from Coos Bay. Eating clams from Coos Bay is like smoking because the high levels of tributyltin."

The following statement from a DEQ Official, "Tissues were sampled for benzo (a) pyrene as part of the Coos Bay Toxics Study but detection limits

were much higher than those for the referenced EPA study", was made in response to the question posed below.

In the findings of the EPA Study, "Chemical Carcinogens Bivalve Mollusks from Oregon Estuaries Chemical Carcinogens Bivalve Mollusks from Oregon Estuaries" EPA-600/3-79-034 March 1979 suggests there are severe consequences to the consumption of shellfish contaminated by Chemical Carcinogens taken and consumed from Oregon Estuaries. My questions are: Has the DEQ or ODA taken the finding of the EPA study in to considerations when developing a management plan to protect the aquatic environment from chemical carcinogens?

Governor, these carcinogens chemical compounds are being released into the environment of the watersheds of our industrialized bays every moment of every day.

The chemical carcinogens affect society in the most intimate ways: the diseases they cause are far reaching destroying the very essence of our humanity. The theft is unapparent because it cannot be seen. It begins with complacency, destroys us physically and drains us emotionally.

You would think with two PHDs sitting in the top position of the Department Marine Resources and with a number of biologists with Masters and

Bachelor degrees the ODFW would have an Invertebrate Species Management Plan in place but they do not. Are these people just plain stupid or are you or Roy Elicker the standing in the way of testing for contaminated shellfish. If the problem is Roy Elicker lack of leadership then fire him. If the problem is your lack of leadership then you should resign.

Consider that the ODFW directs clam diggers or crabbers to areas of Oregon's industrialized bays that are too contaminated with toxins to dig clams or take red rock crabs. We are requesting an answer to why Oregon does not have an Invertebrate Species Management Plan.

As an MD you more than others know the implications of consuming marine invertebrates contaminated with Benzopyrene, Tributyltin, Butyltin, Polychlorinated Biphenyls (PCBs) and other substances over short term an extended period of time.

We are requesting closure of Coos Bay, Yaquina Bay and Tillamook Bay to the taking of clams, mussels and red rock crabs until the State can make a threat assessment and implement a course of corrective measures to remove the contaminates.

Thank you for your consideration, [REDACTED]
[REDACTED]

Brown Trout posted, “The old shell game of agency responsibility.

Are Pam Blake DEQ, Caren Braby ODFW, Dawn Smith ODA, Carla McKelvey MD OHA seriously going to say these Clams from Coos Bay are safe for Pregnant woman to eat? DEQ test showed a clam had 491 parts per billion of butyltin compounds plus a whole list of other known hazardous compounds. What about the effects of compounding compounds into a soup of various toxic compounds.

I called the health department and they told me this amount (491) would be 18 times greater than the recommended safe amount for a 100 lb person. This calculation was based on one contaminate. The Clams are testing with a wide array of contaminants. I asked the Health Department how this would affect a pregnant woman. He said it would not be good. What is going on? Are these four State Agencies communicating?”

My response to Brown Trout’s post

“Considering the content contained on these pages. Your point is well taken.



Funding cuts slowed studies of Coos Bay estuary toxins

It's been a decade since Coos Bay shipyard owners and state environmental officials sat at opposite sides of the table. They were haggling back and forth under the threat of a Superfund listing.

At the time, the U.S. Environmental Protection Agency had labeled five shipyards as contaminated. Three were out of business or headed there.

Within five years, cleanup companies had removed contaminants from the tideflats around each of the shipyards. In other tideflats where there had been concerns about tributyltin contamination, health officials had lifted shellfish advisories after re-evaluating safety levels.

The thinking then was that the bay floor was clean and should stay that way.

That's still the theory, but there's no scientific study confirming it.

"Some of the sampling I did in the mid-'90s is some of the last data collected in Coos Bay," said Pam Blake, a local water quality specialist with the Oregon Department of Environmental Quality.

The state did monitor five sites in 2001 but they were

not the same sites tested before. For Coos Bay, advisories banning shellfish gathering have been lifted over the years as officials re-evaluated allowable toxin levels, Blake said.

More recently, researchers collected sediment and shellfish tissue samples as part of the Coastal Estuary Monitoring and Assessment Program. That data isn't yet available.

DEQ officials aren't sure exactly what's in Oregon's streams and estuaries. The reason for the lack of definitive answers is money. DEQ's toxics testing funding was cut years ago, though Blake said there is resurgence of interest. The agency is planning to ask the 2007 Legislature to again pay for water quality toxics work.

These days, Blake is concerned with bacteria that's flushed into the bay during heavy rains. Also, there are problems in Isthmus Slough and some other remote areas with low dissolved oxygen levels. But that's not related to shipyards.

And when it comes to people's pollution fears on ship recycling, DEQ officials are grappling with an unknown.

The state doesn't have rules specifically dealing with a facility that would tow in former military or outdated commercial vessels for dismantling.

In December, DEQ officials were caught off guard when Virginia-based Bay Bridge Enterprises wanted to pull ships into a slip at Newport. In the fated proposal, workers would have done hazardous materials work inside vessels and then dragged them up on land and cut them apart.

At the time, officials said permitting would be a quick-and-easy process. That didn't set well with legislators or the public.

Since then, Gov. Ted Kulongoski has said no ship recycling operations will happen in Oregon unless the work is done in graving or dry docks. And, while no company has given the state a ship recycling business plan, DEQ has authored a fact sheet on shipbreaking issues concerning Coos Bay. In it, state officials say the agency wants to ensure any operation "would offer equal or better environmental protection than a dry dock."

Our post of Dr. Caren Braby's lack of response to our request for information concerning the contamination of clams and crabs in Coos Bay.

January 14, 2014 **ODFW Request For Information.** No response!!!

The reason for our request for information: Are the bay clams being sold for human consumption taken

in the sub-tidal areas of Coos Bay being harvested in areas of the bay contaminated with toxic compounds and carcinogenic substances? Our request to Dr. Caren Braby PHD. follows.

Dear Caren Braby, [REDACTED] I looked up the rules for the sub-tidal taking of bay clams in Coos Bay and posted the following from:

Clam and Intertidal Section

635-005-0280

Organization of Rules

635-005-0290

Closed Seasons and Areas

(6) Subtidal bay clams in Coos Bay from the following areas:

(a) In depths shallower than 10 feet from mean lower low water; or

(b) The area of South Slough south of the Charleston bridge.

Our request is to identify the entire sub-tidal area of Coos Bay where those licensed to take bay clams actually take bay clams.

Other State agencies have tested the sediment in the deep water area of Coos Bay and found toxic material that pose a threat to the public safety.

We want to know if these areas overlap with the harvest areas of bay clams taken from these areas.

Our request is for the public's benefit and no charge should be assessed for this request for information.

Thank you for your assistance,



January 24, 2014 **ODFW Request For Information**. To date No Response

Dear Caren, Red rock crabs are the crab preferred by many crabbers who routinely take them from our three largest and most contaminated bays listed in order of contamination, Coos Bay, Yaquina Bay and Tillamook Bay.

Is there a relationship between the levels of benzopyrene contamination in red rock crabs and the creosote soaked wooden pilings common to Oregon's larger bays? What is the level of contamination of benzopyrene in red rock crabs? Refer to the quote by ODFW below.

Quotation from ODFW, "At times it may seem like crabs are everywhere in the bay and anywhere would be a good habitat to set your crab gear. Most of the time, however, Dungeness crab prefer sandy bottom habitat and red rock crabs prefer habitat with more structure such as docks, pilings or rocks."



Our post to the members of the Clam Diggers Association of Oregon to raise their level of awareness of the danger of digging shellfish in Coos Bay contaminated with PCBs and Benzo Pyrene.

In the Coos Bay [Sediment Contamination report](#) Area Sediment Contamination report entitled "Coos Bay" and sponsored by the Local Sponsor International Port of Coos Bay, the Port discussed the disposition of contaminated sediments dredged from multiple locations in Coos Bay including PCBs.

My questions are: How contaminated is Coos Bay from PCBs and other toxic substances trapped in the sediment at the bottom of the bay?

Now that the ODA allows the sale of bay clams harvested from the deeper locations in Coos Bay are these clams being harvested from areas of the bay contaminated by PCBs or other toxic substances?

Are the contaminated sediments released from all sources; i.e. the digging effort both recreational and commercial clam digger, current dredging activity, new construction planned for the Coos Bay waterfront threatening or actively contaminating clams in the intertidal area of lower Coos Bay?

Are the oysters being contaminated by release and suspension of contaminated sediment from dredging spoils or from the suspended contaminated particulates from the disturbed sediment generated by dredging and the commercial and recreational clam digging activity?

Will the dredging of the new navigation channel associated with the Natural Gas Export facility release PCBs and other toxic substances trapped in the sediment? Will the suspended contaminated particulates contaminate the shellfish of Coos Bay with PCBs and other toxic substances?

Will leakage from the Natural Gas Export Facility contaminate the shellfish in Coos Bay with benzo (BAP) pyrene and other chemical compounds? Are there safety measures in place to minimize the spill of toxic materials into Coos Bay from the waterfront docks or the planned Natural Gas Facility?

What safe guards are in place to minimize the discharge of non-source point pollution into Coos Bay?

What steps can we take to remove the PCBs and other toxic substances from Coos Bay?

What are Polychlorinated Biphenyls (PCBs)

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You are here: EPA HomeWastesPolychlorinated Biphenyls (PCBs)Health Effects

Health Effects of PCBs You will need Adobe Reader to view some of the files on this page. See EPA's PDF page to learn more.

Learn more about PCBs

Basic Information

Health Effects

PCB Congeners and Homologs

Aroclor and other PCB Mixtures

PCBs have been demonstrated to cause a variety of adverse health effects. PCBs have been shown to cause cancer in animals. PCBs have also been shown to cause a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, endocrine system and other health effects. Studies in

humans provide supportive evidence for potential carcinogenic and non-carcinogenic effects of PCBs. The different health effects of PCBs may be interrelated, as alterations in one system may have significant implications for the other systems of the body. The potential health effects of PCB exposure are discussed in greater detail below.

Cancer

EPA uses a weight-of-evidence approach in evaluating the potential carcinogenicity of environmental contaminants. EPA's approach permits evaluation of the complete carcinogenicity database, and allows the results of individual studies to be viewed in the context of all of the other available studies. Studies in animals provide conclusive evidence that PCBs cause cancer. Studies in humans raise further concerns regarding the potential carcinogenicity of PCBs. Taken together, the data strongly suggest that PCBs are probable human carcinogens.

PCBs are one of the most widely studied environmental contaminants, and many studies in animals and human populations have been performed to assess the potential carcinogenicity of PCBs. EPA's first assessment of PCB carcinogenicity was completed in 1987. At that time, data were limited to Aroclor 1260. In 1996, at the direction of Congress, EPA completed a reassessment of PCB

carcinogenicity, titled "PCBs: Cancer Dose-Response Assessment and Application to Environmental Mixtures" (PDF) (83 pp., 197K) In addition to Aroclor 1260, new studies provided data on Aroclors 1016, 1242, and 1254. EPA's cancer reassessment reflected the Agency's commitment to the use of the best science in evaluating health effects of PCBs. EPA's cancer reassessment was peer reviewed by 15 experts on PCBs, including scientists from government, academia and industry. The peer reviewers agreed with EPA's conclusion that PCBs are probable human carcinogens.

The cancer reassessment determined that PCBs are probable human carcinogens, based on the following information:

There is clear evidence that PCBs cause cancer in animals. EPA reviewed all of the available literature on the carcinogenicity of PCBs in animals as an important first step in the cancer reassessment. An industry scientist commented that "all significant studies have been reviewed and are fairly represented in the document". The literature presents overwhelming evidence that PCBs cause cancer in animals. An industry-sponsored peer-reviewed rat study, characterized as the "gold standard study" by one peer reviewer, demonstrated that every commercial PCB mixture tested caused cancer. The new studies reviewed in the PCB reassessment allowed EPA to develop more accurate potency

estimates than previously available for PCBs. The reassessment provided EPA with sufficient information to develop a range of potency estimates for different PCB mixtures, based on the incidence of liver cancer and in consideration of the mobility of PCBs in the environment.

The reassessment resulted in a slightly decreased cancer potency estimate for Aroclor 1260 relative to the 1987 estimate due to the use of additional dose-response information for PCB mixtures and refinements in risk assessment techniques (e.g., use of a different animal-to-human scaling factor for dose). The reassessment concluded that the types of PCBs likely to be bioaccumulated in fish and bound to sediments are the most carcinogenic PCB mixtures.

In addition to the animal studies, a number of epidemiological studies of workers exposed to PCBs have been performed. Results of human studies raise concerns for the potential carcinogenicity of PCBs. Studies of PCB workers found increases in rare liver cancers and malignant melanoma. The presence of cancer in the same target organ (liver) following exposures to PCBs both in animals and in humans and the finding of liver cancers and malignant melanomas across multiple human studies adds weight to the conclusion that PCBs are probable human carcinogens.

Some of the studies in humans have not

demonstrated an association between exposures to PCBs and disease. However, epidemiological studies share common methodologic limitations that can affect their ability to discern important health effects (or define them as statistically significant) even when they are present. Often, the number of individuals in a study is too small for an effect to be revealed, or there are difficulties in determining actual exposure levels, or there are multiple confounding factors (factors that tend to co-occur with PCB exposure, including smoking, drinking of alcohol, and exposure to other chemicals in the workplace). Epidemiological studies may not be able to detect small increases in cancer over background unless the cancer rate following contaminant exposure is very high or the exposure produces an very unusual type of cancer. However, studies that do not demonstrate an association between exposure to PCBs and disease should not be characterized as negative studies. These studies are most appropriately viewed as inconclusive. Limited studies that produce inconclusive findings for cancer in humans do not mean that PCBs are safe.

It is very important to note that the composition of PCB mixtures changes following their release into the environment. The types of PCBs that tend to bioaccumulate in fish and other animals and bind to sediments happen to be the most carcinogenic components of PCB mixtures. As a result, people who ingest PCB-contaminated fish or other animal

products and contact PCB-contaminated sediment may be exposed to PCB mixtures that are even more toxic than the PCB mixtures contacted by workers and released into the environment.

EPA's peer reviewed cancer reassessment concluded that PCBs are probable human carcinogens. EPA is not alone in its conclusions regarding PCBs. The International Agency for Research on Cancer has declared PCBs to be probably carcinogenic to humans. The National Toxicology Program has stated that it is reasonable to conclude that PCBs are carcinogenic in humans. The National Institute for Occupational Safety and Health has determined that PCBs are a potential occupational carcinogen.

Non-Cancer Effects

EPA evaluates all of the available data in determining the potential noncarcinogenic toxicity of environmental contaminants, including PCBs. Extensive study has been conducted in animals, including non-human primates using environmentally relevant doses. EPA has found clear evidence that PCBs have significant toxic effects in animals, including effects on the immune system, the reproductive system, the nervous system and the endocrine system. The body's regulation of all of these systems is complex and interrelated. As a result, it is not surprising that PCBs can exert a multitude of serious adverse health effects. A

discussion of the potential non-cancer health effects of PCBs is presented below.

Immune Effects

The immune system is critical for fighting infections, and diseases of the immune system have very serious potential implications for the health of humans and animals. The immune effects of PCB exposure have been studied in Rhesus monkeys and other animals. It is important to note that the immune systems of Rhesus monkeys and humans are very similar. Studies in monkeys and other animals have revealed a number of serious effects on the immune system following exposures to PCBs, including a significant decrease in size of the thymus gland (which is critical to the immune system) in infant monkeys, reductions in the response of the immune system following a challenge with sheep red blood cells (a standard laboratory test that determines the ability of an animal to mount a primary antibody response and develop protective immunity), and decreased resistance to Epstein-Barr virus and other infections in PCB-exposed animals. Individuals with diseases of the immune system may be more susceptible to pneumonia and viral infections. The animal studies were not able to identify a level of PCB exposure that did not cause effects on the immune system.

In humans, a recent study found that individuals

infected with Epstein-Barr virus had a greater association of increased exposures to PCBs with increasing risk of non-Hodgkins lymphoma than those who had no Epstein-Barr infection. This finding is consistent with increases in infection with Epstein Barr virus in animals exposed to PCBs. Since PCBs suppress the immune system and immune system suppression has been demonstrated as a risk factor for non-Hodgkin's lymphoma, suppression of the immune system is a possible mechanism for PCB-induced cancer. Immune effects were also noted in humans who experienced exposure to rice oil contaminated with PCBs, dibenzofurans and dioxins.

Taken together, the studies in animals and humans suggest that PCBs may have serious potential effects on the immune systems of exposed individuals.

Reproductive Effects

Reproductive effects of PCBs have been studied in a variety of animal species, including Rhesus monkeys, rats, mice and mink. Rhesus monkeys are generally regarded as the best laboratory species for predicting adverse reproductive effects in humans. Potentially serious effects on the reproductive system were seen in monkeys and a number of other animal species following exposures to PCB mixtures. Most significantly, PCB exposures were found to reduce the birth weight, conception rates and live birth rates of monkeys and other species and PCB exposure

reduced sperm counts in rats. Effects in monkeys were long-lasting and were observed long after the dosing with PCBs occurred.

Studies of reproductive effects have also been carried out in human populations exposed to PCBs. Children born to women who worked with PCBs in factories showed decreased birth weight and a significant decrease in gestational age with increasing exposures to PCBs. Studies in fishing populations believed to have high exposures to PCBs also suggest similar decreases. This same effect was seen in multiple species of animals exposed to PCBs, and suggests that reproductive effects may be important in humans following exposures to PCBs.

Neurological Effects

Proper development of the nervous system is critical for early learning and can have potentially significant implications for the health of individuals throughout their lifetimes. Effects of PCBs on nervous system development have been studied in monkeys and a variety of other animal species. Newborn monkeys exposed to PCBs showed persistent and significant deficits in neurological development, including visual recognition, short-term memory and learning. Some of these studies were conducted using the types of PCBs most commonly found in human breast milk.

Studies in humans have suggested effects similar to

those observed in monkeys exposed to PCBs, including learning deficits and changes in activity associated with exposures to PCBs. The similarity in effects observed in humans and animals provide additional support for the potential neurobehavioral effects of PCBs.

Endocrine Effects

There has been significant discussion and research on the effects of environmental contaminants on the endocrine system ("endocrine disruption"). While the significance of endocrine disruption as a widespread issue in humans and animals is a subject of ongoing study, PCBs have been demonstrated to exert effects on thyroid hormone levels in animals and humans. Thyroid hormone levels are critical for normal growth and development, and alterations in thyroid hormone levels may have significant implications.

It has been shown that PCBs decrease thyroid hormone levels in rodents, and that these decreases have resulted in developmental deficits in the animals, including deficits in hearing. PCB exposures have also been associated with changes in thyroid hormone levels in infants in studies conducted in the Netherlands and Japan. Additional research will be required to determine the significance of these effects in the human population.

Other Non-cancer Effects

A variety of other non-cancer effects of PCBs have been reported in animals and humans, including dermal and ocular effects in monkeys and humans, and liver toxicity in rodents. Elevations in blood pressure, serum triglyceride, and serum cholesterol have also been reported with increasing serum levels of PCBs in humans.

In summary, PCBs have been demonstrated to cause a variety of serious health effects. PCBs have been shown to cause cancer and a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, and endocrine system. Studies in humans provide supportive evidence for the potential carcinogenicity and non-carcinogenic effects of PCBs. The different health effects of PCBs may be interrelated, as alterations in one system may have significant implications for the other regulatory systems of the body.

Our post demonstrating the double standard of the State requiring applicants of public information to pay thousands of dollars in fees to request public information.

The DEQ, ODFW and the Commission for the Port of Coos Bay are wasting precious tax dollars by either refusing to answer our request for public information from public documents, transferring our request from

department to department requiring that we resubmit our request for information or demanding payment for documents that are for the public good. As shown below, these fees can run into the tens of thousands of dollars. When the State Agencies ignore our request of information we have to appeal to either the Attorney General or in the case of the Coos Bay Port Commission the Coos County District Attorney. The rules for information requests are designed to censor requests for public information, so much for freedom of information!!! So much for our civil liberties in a free society!!! Too much power in the hands of so few!!! Our commission form of appointing commissioners rather than electing them empowers the Governor's absolute rule of law.

DA waives Sierra Club's fees

COQUILLE — Coos County's district attorney ruled that the Oregon International Port of Coos Bay was unreasonable in charging more than \$16,000 in attorney's fees to fulfill a public records request made by the Sierra Club.

March 01, 2012 11:00 am

Sierra Club asks for \$20K fee waiver

An environmental group has appealed to Coos County District Attorney R. Paul Frasier to waive about \$20,000 in fees for records from the Oregon International Port of Coos Bay.

The DEQ's response to our questions:

The DEQ's response to the questions of contaminants common to Coos Bay. The Devil in the details or so they say. Without finding fault with the DEQ the people who dig clams from our industrialized bays should dig bay clams from other locations because the clams are not fit for our consumption.

The DEQ's response to the questions and their response follows.

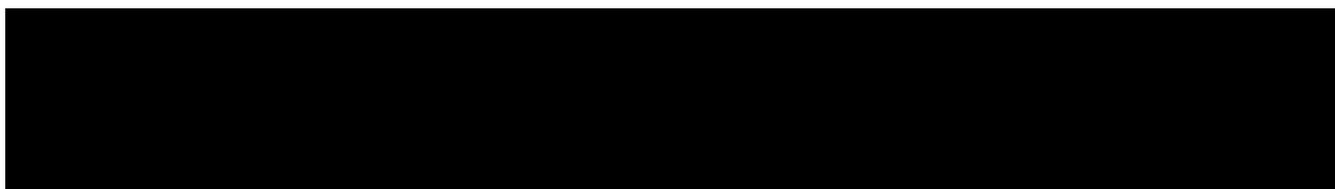
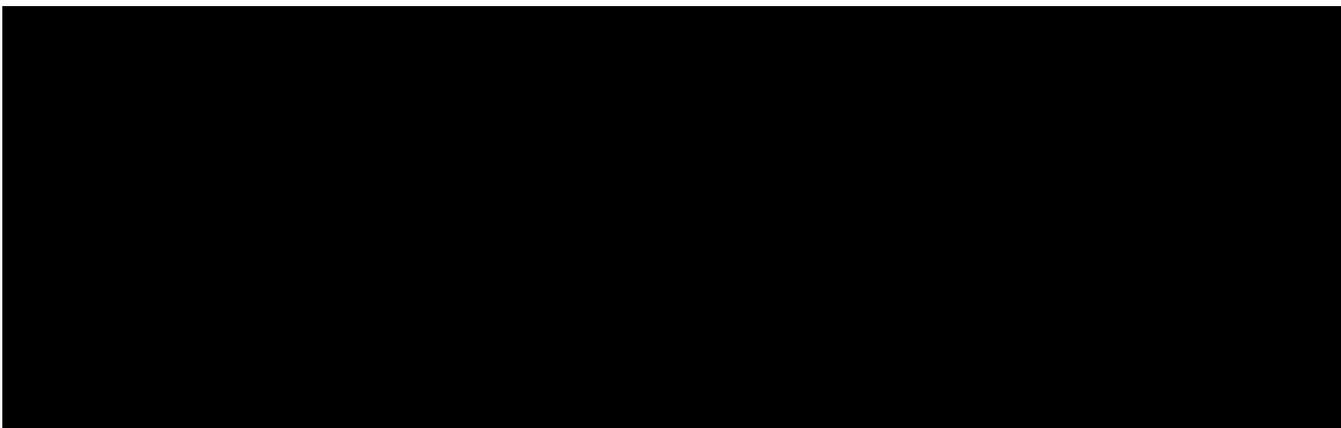
Dear Mr. Lackner,

Director Dick Pedersen asked that I respond to your email from November regarding shellfish and possible contamination in Coos Bay. Attached to this email is a copy of our letter in response to your inquiry. Attachment 1 has detailed responses to your questions. Attached to a separate email to follow are several reports and documents we have retrieved and collected in order to meet your request. The documents are large and can't be accommodated in one email.

I hope this information is helpful.

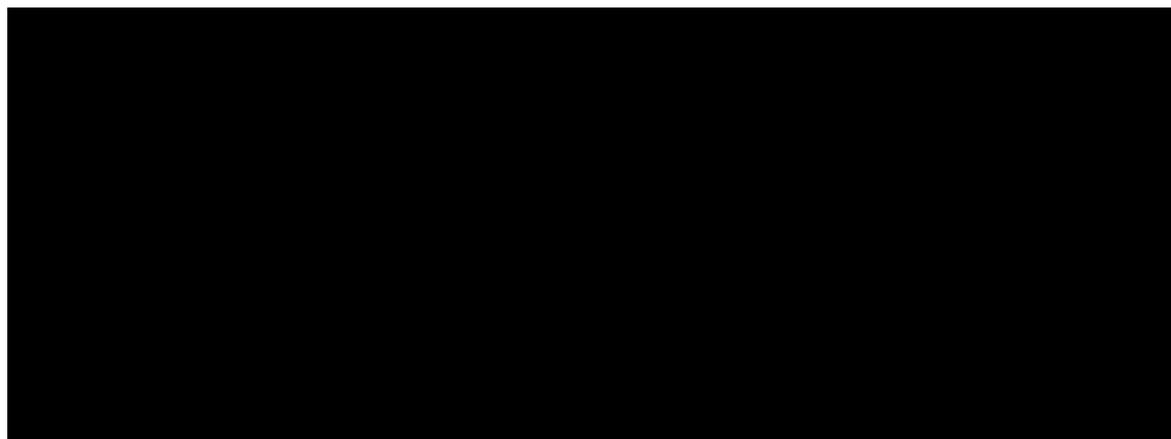
We've invested considerable staff time providing as complete and thorough answers to your questions as we can. In accordance with Oregon information

request law, DEQ must keep a record of this request, the materials provided and the time taken to meet the request.



If you have any questions about the information contained here, please feel free to contact me directly, or any of the contacts found in the detailed responses to your questions.

Sincerely,



DEQ's Response to Shellfish Questions

1. Are the bay clams dug by recreational clam diggers safe to eat from both the intertidal and subtidal areas of Coos Bay?

Agency information indicates that no type of closure or health advisory is currently in effect for the recreational harvest of shellfish from Coos Bay. ODA and ODFW are responsible for issuing safety warnings about levels of biotoxins (e.g., paralytic shellfish poison, Domoic acid) detected in mussels and clams targeted by recreational harvesters. The Oregon Health Authority (OHA) issues advisories for inland freshwater fish and shellfish as part of sport fishing health advisory program.

Below is a list of websites where shellfish safety information can be found.

- The ODA Shellfish Safety website and hotline has information on the current status of any shellfish closures or health advisories.

(www.oregon.gov/ODA/FSD/Pages/shellfish_status.aspx)

- The ODFW Shellfish Program web-site provides a direct link to the ODA Shellfish Safety web-site and hotline. (www.dfw.state.or.us/MRP/shellfish/index.asp)

- ODFW advises the public to check the ODA website and hotline frequently to learn updated information about any shellfish safety closures.

(www.oregon.gov/ODA/FSD/Pages/shellfish_status.aspx).

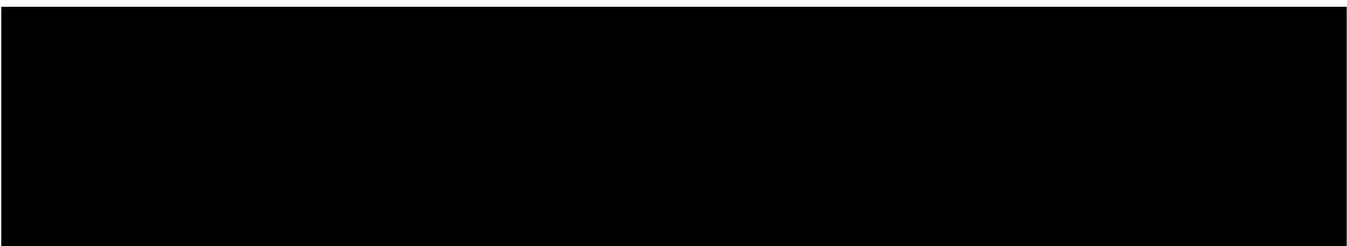
- ODFW also issues a weekly Recreation Report for the Marine Zone which includes an update on the status of recreational shellfish safety.

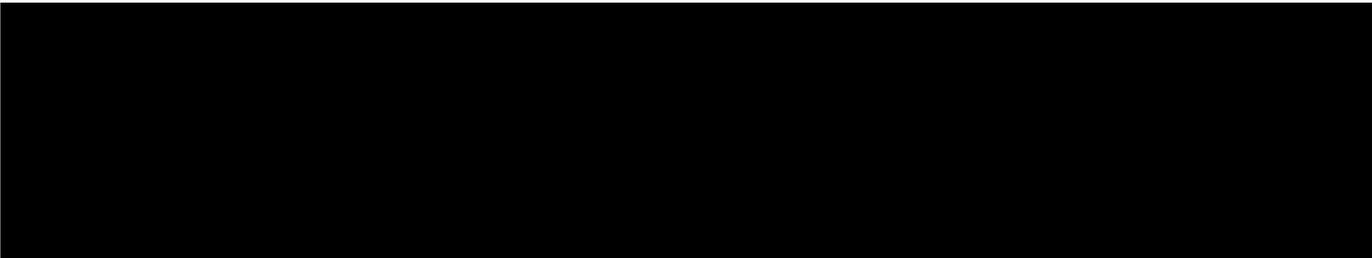
(<http://www.dfw.state.or.us/RR/marine/>)

- OHA provides inland fresh fish and shellfish consumption information on their website.

public.health.oregon.gov/healthyenvironments/recreation/pages/fishconsumption.aspx#contaminants

In addition, the Oregon Health Authority (OHA) and the Oregon Emergency Response System (OERS) provides incident notice about sewage spills or significant releases of wastewater/stormwater that may contribute to elevated levels of fecal indicator bacteria in the bays and estuaries.





2. Are the Oysters harvested from Coos Bay safe to eat?

The Oregon Department of Agriculture (ODA) regulates areas of Oregon bays and estuaries that are open to the commercial mariculture of oysters. Commercial cultivation of oysters is permitted in specific regions of the bay that are periodically tested while other areas are closed to commercial mariculture. No type of closure or health advisory is currently in effect for the commercial cultivation of oysters in the permitted mariculture areas in Coos Bay. During the winter and spring months, periodic closures may be placed into effect due to elevated fecal indicator bacteria associated with rainfall events and stormwater runoff. In the event that samples of oyster tissues or water exceed permissible standards, the commercial cultivation areas are closed and sales of the shellfish are suspended. In addition, please see response to question 1.

3. Are the bay clams harvested by commercial clam diggers in the subtidal areas of Coos Bay safe to eat?

The Oregon Department of Agriculture (ODA) regulates areas of Oregon bays and estuaries that

are open to the commercial harvest of bay clams. Commercial harvest of bay clams is permitted in specific regions of the bay while other areas are closed to commercial harvest. No type of closure or health advisory is currently in effect for the commercial harvest of bay clams in the permitted harvest areas in Coos Bay. In the event that samples of clam tissues or water exceed permissible standards, the commercial harvest areas are closed and sales of the shellfish are suspended. Please see response to question 1.

4. Does the ODA, DEQ or ODFW test the sediment from all areas of Coos Bay where shellfish are harvested for human consumption?

The Coos Bay toxics study analyzed sediments and meats from many recreational and commercial shellfish growing areas in Coos Bay for a wide variety of contaminants. Results from these sampling events (1992 through 1995) have been summarized in the attached spreadsheets: "Tissue Detects 92-95", "TBT Tissue Results 92-95" and "Coos Bay Sediment Results 92-95". This sampling led to the implementation of a tributyl tin bioaccumulation study (see the attached "Bioaccumulation Report" dated October 1998).

Oregon's estuaries were sampled during the summer between 1999 and 2006 as part of the Coastal Estuary Monitoring and Assessment Program

(CEMAP). A total of 59 sites were sampled in Coos Bay. The attached document "South Coast Basin Watershed Assessment CEMAP" provides additional information regarding the results of this sampling effort. Because whole fish were analyzed rather than edible flesh these results do not lend themselves to an evaluation of human health risks.

In 2013, DEQ's Toxics Monitoring Program sampled water and sediment at six sites and shellfish meats at 5 sites. These data will not fully be available for an estimated 12 months (See attached map of sampling locations. The file is named "Coos Basin Sample Sites 2013". The project had a large geographic scope and a limited number of allowed samples.

Please check with ODA and OHA regarding their testing programs for shellfish. Shellfish Safety Consideration Attachment 1 Page 3 of 7

5. Does the ODA, DEQ or ODFW test the shellfish harvested from all areas of Coos Bay for contaminated materials and pathogens?

DEQ sampled shellfish along the Oregon Coast this summer including Coos Bay. Five tissue samples from shellfish were frozen and will be analyzed later. Our findings will be available to the public in about a year.

Please contact ODA on their testing programs for

shellfish in Coos Bay.

6. Has the DEQ evaluated the sediment in the area to be dredged in connections with the development of the Natural Gas Export Facility or the contaminated tidal areas disclosed in the Sediment Contamination report entitled "Coos Bay" and sponsored by the Local Sponsor International Port of Coos Bay for the presence of PCBs or other toxic substances?

Natural Gas Export Project

The proposed areas to be dredged for the slip, access channel, and pipeline were tested according to U.S Army Corps of Engineers guidelines called the "sediment evaluation framework." Sample results were below levels of concern. Below is a brief description of the dredge area sampled and the analyses that were performed.

Jordan Cove Project Description - The amount of material proposed to be excavated and dredged to create the new slip is approximately 4.3 million cubic yards (approximately 2.3 million cubic yards excavated and 2.0 million cubic yards dredged). During creation of the slip, dry excavated material will be hauled by trucks along a road created with excavated material to the former Mill Site/South Dunes Power Plant Site to be used as fill. Material removed to drop the slip below -10 feet in elevation will be hydraulically transported to the former Mill

Site/South Dunes Site via a hydraulic dredge pipeline corridor.

An additional 1.3 million cubic yards of sediment material will be dredged to create the access channel, creating a total of 5.6 million cubic yards of material to be dredged and excavated for creation of both the slip and the access channel. Excavated and dredged material would be disposed of primarily at the following two locations: (1) the adjacent former Mill Site/South Dunes Site (upland; future location of the South Dunes Power Plant), and (2) the former Ingram Yard/LNG Liquefaction and Terminal Site (upland) north of the slip.

Future maintenance dredging would be required to maintain navigational depths for deep draft vessels that call at the new marine terminal. The 37,700 cubic yards of material per year from the maintenance dredging will be placed at a U.S. Environmental Protection Agency designated offshore location.

In 2006 Jordan Cove sampled sediments around their proposed access channel according to the sediment evaluation framework (SEF). This framework guides dredge spoils disposal options and can be used to evaluate the need for cleanup activities. Samples Shellfish Safety Consideration Attachment 1 Page 4 of 7 consisted mostly of sands and didn't meet the threshold for additional analytical

testing. (See the following web link for access to the report: www.jordancoveenergy.com/FERC/Vol_1-B/RR2/Appendices_A.2-F.2/Appendix_B.2-Sediment_Sampling_Analysis_Report/Appendix_B.2_Sediment_Sampling_and_Analysis_Report.pdf).

Pacific Connector Project Description - Pacific Connector is proposing to install approximately 2.4 miles of 36-inch diameter concrete weighted pipeline to transport natural gas beneath Haynes Inlet. The pipeline will be installed in a trench excavated to approximately 8 feet below mudline using a clamshell dredge or similar equipment. The excavated material will be placed adjacent to the trench within the construction area and replaced in the trench as backfill after the pipeline is installed. It is expected that all of the excavated sediment will be reused as backfill; sediment will not be removed from the project site or from the water.

The total volume of material that will be dredged (and then backfilled) will be approximately 150,000 cubic yards, and this will occur as a one-time event.

In June 2010 Pacific Connector collected 81 discrete samples along the pipeline route in Coos Bay. The samples were homogenized into 3 composites and analyzed for metals, PAHs, chlorinated hydrocarbons, phthalates, phenols, pesticides, PCBs, and tributyltin.

Arsenic, chromium, copper, lead, nickel, zinc, diethyl phthalate, bis (2-ethylhexyl) phthalate and tributyltin (pore water) were detected in one or more composite sediment samples at concentrations less than marine screening levels for dredge spoil disposal. Please reference the attached report called "Sediment Characterization Haynes Inlet Report Aug 2010" for sample locations and sample results.

The contaminated tidal areas disclosed in the Sediment Contamination report have been further evaluated and cleanup activities were initiated at the Hillstom and Mid Coast Marine sites. Detailed information on the cleanups can be accessed through the facility profiler tool at the following link deq12.deq.state.or.us/fp20/. Type in the facility names listed above under the search by "Geographic/Facility" tab.

7. Will the State remove toxic substrate associated with the Natural Gas Export facility in a manner to minimize contamination of shellfish prior to beginning construction?

The substrate associated with dredging the slip, access channel, and pipeline was sampled and determined to be suitable for unconfined disposal. No cleanup is required prior to construction of the facilities. DEQ will issue a water quality certification that will require limited duration adverse water

quality impacts be managed and minimized to protect beneficial uses including shellfish.

8. My question is: In the EPA Superfund Record of Decision: PORT OF COOS BAY - CHARLESTON BOAT YARD EPA ID: OR0001389972 OU 00 COOS BAY, OR dated 06/19/2001, the EPA requires the Periodic long-term monitoring of intertidal

Shellfish Safety Consideration Attachment 1 Page 5 of 7

and subtidal sediments. Did the DEQ or any other State or Federal agency monitor the Super Fund site for contaminate as required by the EPA.

Rather than list the Charleston Boat Yard on the federal Superfund National Priorities List for cleanup, the U.S. EPA referred their regulatory oversight role to Oregon DEQ in 1998.

DEQ decided in 2001 that several cleanup actions were needed for soil and sediments contaminated with chromium, nickel, mercury, zinc and tributyltin at the Charleston Boat Yard from historical releases. As the property owner, the Port of Coos Bay responded with removal of the most contaminated sediments (approximately 300 cubic yards), capping of upland soils, and implementation of best management practices to avoid further pollution. Samples collected after the sediment removal

showed that contamination levels had dropped below levels of concern. Please visit the following web link for more information about cleanup and monitoring efforts in the Charleston Boat Yard:

www.deq.state.or.us/Webdocs/Forms/Output/FPController.ashx?SourceIdType=11&SourceId=1905&Screen=Load .

Under the cleanup agreement with the Port, DEQ required the Port to undertake long term monitoring and sampling of sediments at five-year intervals to confirm the effectiveness of the Port's cleanup actions and pollution prevention efforts. To date, DEQ has not received the results of this long-term monitoring.

DEQ based its sediment cleanup decisions for the Charleston Boat Yard on screening levels that are typically used in the state of Washington's Puget Sound for safe offshore sediment disposal. The states of Washington and Oregon believe that these sediment screening levels for sediments are conservative and protective of marine organisms, including clams.

9. In the Coos Bay Sediment Contamination report Area Sediment Contamination report entitled "Coos Bay" and sponsored by the Local Sponsor International Port of Coos Bay, the Port discussed the disposition of contaminated sediments dredged

from multiple locations in Coos Bay. My questions are:

A. Now that the ODA allows the sale of bay clams harvested from the deeper locations in Coos Bay are these clams being harvested from areas of the bay contaminated by toxic materials or pathogens?

The referenced report discusses September 2009 sampling results for the deeper channel. The report discusses using the grain size of substrate as screening technique. The grain size is assumed to be an adequate indicator of the whether contaminants would be present or not. This screening technique is primarily applied to the US Army Corps' decision making related to dredge spoil disposal options. Because of the large grain sizes found in deeper areas of the channel the sediments/sands present are assumed to be "clean" enough for unconfined ocean disposal. DEQ has not Shellfish Safety Consideration Attachment 1 Page 6 of 7 conducted additional deep water sediment or meat contaminant sampling. Both the Coos Bay toxics study and the more recent DEQ Toxics Monitoring Program study sampled shoreline sediments and meats only.

B. Are the contaminated sediments released by the digging effort by commercial clams contaminating clams in the intertidal area of lower Coos Bay?

This activity is considered to result in minimal water

quality impacts and as such is not required to monitor turbidity conditions. Because the substrate is primarily composed of sands it is expected that suspended particles would settle quickly.

C. Are the oysters being contaminated by release and suspension of contaminated sediment from dredging spoils or from the suspended contaminated particulates from the disturbed sediment generated by commercial and recreational clam digging activity?

Water quality samples were collected in conjunction with the dredging of Isthmus Slough sediments in 1995. A scanned copy of the data sheets has been provided in the attached analytical report called "Dredge Related Sampling 95." No significant increases in contaminants were measured.

10. The finding of the EPA Study, "Chemical Carcinogens Bivalve Mollusks from Oregon Estuaries Chemical Carcinogens Bivalve Mollusks from Oregon Estuaries" EPA-600/3-79-034 March 1979 suggests there are severe consequences to the consumption of shellfish contaminated by Chemical Carcinogens taken and consumed from Oregon Estuaries. My questions are: Has the DEQ or ODA taken the finding of the EPA study in to considerations when developing a management plan to protect the aquatic environment from chemical carcinogens?

DEQ has not developed a specific management plan to protect the aquatic environment from chemical carcinogens. The water quality standards are the foundation of the water quality-based control program mandated by the Clean Water Act. Water quality standards define the goals for surface waters in Oregon by designating uses, setting criteria to protect those uses and establishing provisions to protect water quality from pollutants.

DEQ is responsible for establishing water quality criteria for toxic pollutants to protect both aquatic life and human health. These criteria are established to protect surface water for aquatic life use, to allow Oregonians to consume fish and shellfish, and to use state waters for drinking water without adverse health effects. DEQ develops its water quality criteria based on EPA recommended criteria. More information about water quality standards for toxic pollutants can be found at:

www.deq.state.or.us/wq/standards/toxics.htm.

The State of Oregon does not currently have sediment contaminant criteria. The document at the following link is an Issue Paper: Sediment Policy Revisions to Reduce Nonpoint Sources of Toxic Pollutants to Oregon Waters. No rule changes are currently recommended: Shellfish Safety Consideration Attachment 1 Page 7 of 7

www.deq.state.or.us/wq/standards/docs/toxics/

humanhealth/rulemaking/SedimentIssuePaper.pdf.

Tissues were sampled for benzo (a) pyrene as part of the Coos Bay Toxics Study but detection limits were much higher than those for the referenced EPA study. The compound was not detected over the applied level of quantification. The Coastal Estuary Monitoring and Assessment Program (CEMAP) project did not sample for PAHs in fish tissue because fish metabolize these compounds. The CEMAP project did not sample shellfish. Tissue samples collected in 2013 will be analyzed for PAHs.

11. Does the State and/or Federal agency have proactive management plan to reduce the carcinogenic compounds from entering our waterways?

The water quality standards are the foundation of the water quality-based control program mandated by the Clean Water Act. PAHs are included among the compounds for which water quality criteria have been developed. DEQ develops its water quality criteria based on EPA recommended criteria.

In addition, DEQ has programs that are designed to minimize impacts to Coos Bay. DEQ's Water Quality Program issues permits to facilities that discharge to the bay. DEQ evaluates applications through our National Pollutant Discharge Elimination System permit program for various discharges such as

stormwater and wastewater. Discharge permit limits and other facility requirements are set to protect beneficial uses in the bay. DEQ's Cleanup Program works with facilities to address releases of hazardous substances.

12. Will the State and Federal Agencies produce the documentation in support of their answers to our questions?

We have included references when available.

13. Considering our findings with regard to the contamination of shellfish in Oregon's Estuaries on the internet, how can the DEQ and ODA and ODFW restore the public confidence in shellfish as commodity that is safe for consumption?

We hope that the information provided has addressed many of your areas of concern. DEQ will continue to monitor environmental health in Coos Bay. Through our permitting, nonpoint source, and cleanup programs we will seek to reduce and address pollution issues. We recommend checking ODA's and ODFW's website for recreational shellfish safety updates.

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