

FINAL REPORT
Harris County Seafood Consumption Advisory Public Education Campaign
Contract No. 11-006-000-4304
Subrecipient: Galveston Bay Foundation
October 7, 2010 – March 31, 2012

Overview

The Galveston Bay Foundation (GBF) has completed the *Harris County Seafood Consumption Advisory Public Education Campaign*, a project funded through a Texas Coastal Management Program grant administered by the Texas General Land Office. The purpose of campaign was to educate Harris County Precinct 2 (HCPCT2) area fishermen, crabbers, and residents in general about the risks of human consumption of seafood contaminated with toxic substances.

This area, along the Harris County shorelines on the Houston Ship Channel (HSC) and contiguous waters such as Buffalo Bayou; the lower San Jacinto River, and Upper Galveston Bay has been impacted by multiple seafood consumption advisories over the last 20 years. These advise that adults limit consumption of the following species to 8 ounces per month and further advise no consumption for women who are nursing, pregnant, or may become pregnant and children under twelve years old:

1. ADV-3 (1990): HSC/San Jacinto River and contiguous waters downstream of Hwy. 90 and Upper Galveston Bay north of a line from Red Bluff Pt. to Five Mile Cut Marker to Houston Pt. due to presence of dioxin in blue crabs and catfish.
2. ADV-20 (2001): HSC and contiguous waters upstream of Lynchburg Ferry and San Jacinto River downstream of Hwy. 90 bridge due to presence of dioxin, organochlorine pesticides, and PCBS in all species of fish.
3. ADV-28 (2005): HSC/San Jacinto River and contiguous waters downstream of Hwy. 90 and Upper Galveston Bay north of a line from Red Bluff Pt. to Five Mile Cut Marker to Houston Pt. due to presence of PCBs in spotted seatrout.
4. ADV-35 (2008): Galveston Bay system and contiguous waters due to the presence of dioxin and PCBs in all species of catfish and spotted seatrout.

Geographic emphasis was focused in low income areas in the eastern part of the precinct that have a high percentage of Spanish-speaking immigrants from Mexico and South America. Within that area, particular emphasis was placed on reaching subsistence fishermen since much of protein in their diet is dependent on local fish and shellfish.

Potential education and outreach tools in the work plan included brochures, flyers, multi-language signs, print advertisements, radio spots, and presentations. The campaign was designed to complement the signs previously placed along the Houston Ship Channel by HCPCT2, a seafood consumption advisory webpage on the Galveston Bay Estuary Program (GBEP) website and a seafood consumption advisory brochure produced by Houston-Galveston Area Council (H-GAC).

Completed Tasks

Task 1. Form a Workgroup and Develop a Work Plan

The Galveston Bay Foundation (GBF) assembled and collaborated a work group to develop and review a project work plan, including representatives of HCPCT2, Texas Department of State Health Services (TDSHS), Texas Parks and Wildlife, Texas General Land Office, Texas Commission on Environmental Quality, GBEP, H-GAC, U.S. Fish and Wildlife, National Marine Fisheries Service, San Jacinto River Waste Pits Superfund Site (SJRWP) Community Awareness Committee (CAC; formed to provide community and stakeholder feedback on the U.S. EPA-facilitated site cleanup), and Texans Together (a non-profit organization working to inform the public about the waste pits).

Many representatives of this group had worked on seafood consumption education and outreach in response to the TDSHS advisories, and in the case of CAC and Texans Together, specifically in response to the SJRWP being placed on the National Priorities (Superfund) List, which made it eligible for further EPA investigation and responsible party/taxpayer cleanup.

Task 2. Develop a Prioritized List of Popular Fishing Areas and Other Areas Known to be Utilized by Subsistence Fishermen

In consultation with the members of the workgroup, GBF developed a prioritized list of popular recreational fishing areas and other areas known to be fished by subsistence fishermen on waterways within the eastern area of Harris County Precinct 2 jurisdiction. GBF confirmed these locations by performing site visits or communication to workgroup members (see Attachment 1).

Task 3. Inventory of Outreach Methods and Materials.

GBF inventoried existing sign locations and existing education and outreach materials/distribution methods. Given the lack of funds that TDSHS had for outreach, let alone seafood tissue sampling, the only outreach that had been completed in the past was performed by (a) HCPCT2 (signs placed at 7 locations on the HSC/contiguous waters in late 2004 and 2005: River Terrace Park, Moncrief Park, Rio Villa Park, San Jacinto Battleground State Historic Site, Market Street, and Burnet Bay off of Lynchburg Road), (b) GBEP (webpage at <http://www.gbep.state.tx.us/hot-topics/seafood-safety.asp>), (c) TPWD (a small section in their *Outdoor Annual* (<http://www.etypeservices.com/SWF/LocalUser/texasmonthly1//Magazine3594/Full/index.aspx?id=3594#/54/zoomed>) and (d) H-GAC (an HSC seafood consumption advisory brochure).

The results of canvassing by Texans Together in April 2011 indicated that local residents wanted additional and adequate signs to be placed at popular fishing locations. Additionally, data produced by the de La Garza Public Relations, Inc. intercepts (interviews) of fishermen in May 2011 and paid for by the SJRWP responsible parties indicated that fishermen were most likely to receive their information when they are fishing, i.e. via signs. As a result of these data and feedback from the work group, GBF came to the conclusion that a combination of new signs in English (Attachment 2 & 3) and Spanish (Attachment 4 & 5) combined with a revised H-GAC seafood consumption advisory brochure in English (Attachment 6) and Spanish (Attachment 7) would provide the most effective and efficient outreach to those at risk of consuming fish from our local waterways.

The data indicated that Vietnamese-speaking fishermen and crabbers were not in large numbers in this area, rather the majority were Anglo, African-American, or Hispanic. Therefore, GBF decided not to pursue production of signs and brochures in Vietnamese.

Task 4. Acquire Sign Materials and Place Them in at Least 20 Priority Locations.

GBF originally planned to place signs at locations that reflected the highest incidence of use/highest risk of consumption of contaminated seafood. By the conclusion of the grant, our project partners had placed a total of 112 signs at 56 locations. This includes the following installations by each partner: Harris County Precinct 2 (HCPCT2) – 62 signs at 31 locations, City of Baytown – 38 signs at 19 locations, Texas Parks and Wildlife Department – 8 signs at 4 locations, San Jacinto Battleground Association – 2 signs at 1 location, City of Shoreacres – 2 signs at 1 location. See Attachment 8 for photos of installed signs and Attachment 9 for a map of sign locations.

After review of our original placement plans with Harris County Precinct 2 (HCPCT2) and the City of Baytown, it was decided that HCPCT2 would keep 6 signs (3 in English and 3 in Spanish) in storage and Baytown would keep 2 signs in storage in the event that signs are stolen or vandalized beyond repair. These signs could also be placed by our in-kind partners at additional sites deemed worthy for installation. GBF will receive updates from our partners that are placing brochures at these locations about any damage, theft, or vandalism that occurs and we recording recommendations for additional locations. See Attachment 10 for a spreadsheet with specific locations and numbers of signs at each location.

This higher number of signs reflects the results of studies that indicated that signs, more than any other type of outreach, would be the most effective as noted in Task 3 above.

Task 5. Media and Outreach

Based on the data collected by GBF, a decision was made to focus on sign installation, develop brochures to place at each sign location, develop brochures to place at community gathering areas, develop a complementary seafood advisory webpage, and to give presentations and media interviews when possible.

GBF provided H-GAC with recommendations to revise their brochure so that it was more inclusive of all existing advisories, and not just those on the Houston Ship Channel. GBF then had the text of the brochure translated into Spanish by our partners at Texans Together. The brochure was reproduced and placed in the brochure holders at each of the sign locations. See Attachment 6 & 7 for the brochure.

To enhance the messaging, GBF created a new 1-page flyer that was placed in the literature holders at each sign location and distributed at community centers, libraries, churches, and other gathering locations. 20,000 of each of the English and Spanish flyers were printed and have been placed at the sign locations and other locations by GBF and its partners (HCPCT2, San Jacinto River Coalition, TPWD, City of Baytown, and City of Shoreacres). In particular, the San Jacinto River Coalition's members live in the area and restock the sign locations on a periodic basis (at least monthly, but usually weekly or every two weeks). In addition, Environmental Science students from Lee College are restocking locations in Baytown. This allows us to place brochures in the holders as needed and reduces problems of weathering of printed documents. See Attachment 11 and 12.

The signs included a QR code that linked smart phone users directly to our Seafood Consumption Advisory webpage as well as GBF's phone number where they could call for further information. GBF fielded on average 5-10 calls per week from September 2011 when they were first installed through November 2011, at which point the number of phone calls dropped to 0-5 calls per week. GBF continues to received calls on a regular, albeit less frequent basis than after the first few months after

sign installation. We feel that means the message has gotten across to local fishermen and that the additional calls are from fishermen who are visiting the location for the first time or those who finally decided to call.

Approximately 30,000 flyers were produced with the front in English and back in Spanish to distribute to students in local school districts whose boundaries are located within the worst of the seafood advisories on the Houston Ship Channel and San Jacinto River upstream of Lynchburg Ferry: Goose Creek Consolidated ISD (20,000 flyers), Channelview ISD (9,000 flyers - submitted electronically to ISD for their reproduction and distribution at each individual school), Pasadena ISD (10,000 flyers to 13 schools). Galena Park, a fourth ISD in the high impact area, did not approve of the flyer distribution. GBF will follow up with Galena Park ISD and use separate funds if available for future flyer dissemination. Other school districts being investigated for separate future distribution are Crosby ISD, Deer Park ISD and LaPorte ISD. See Attachment 13 for an example of one of the school flyers (GCCISD).

In addition to the signs, the brochures and flyers contain the url to our English (http://galvbay.org/advocacy_seafood.html) and Spanish (http://galvbay.org/advocacy_seafood_es.html) versions of the Seafood Advisories webpage. GBF also linked to the H-GAC brochures from the webpage.

GBF also gave multiple presentations on the seafood consumption advisory issue to a variety of audiences. See Attachment 14.

GBF gave an interview to KHOU Channel 11, our local CBS affiliate which was filed on July 21, 2011. See <http://www.khou.com/news/EPA-investigating-more-possible-toxins-near-San-Jacinto-River-125977848.html>.

Lessons Learned and Recommendations

The signs were very visible to fishermen, based on the number of phone calls that GBF has received since they were erected. However, it is not uncommon to see people fishing and crabbing immediately adjacent to the signs or even using the signs to prop their fishing poles or tie off their bait buckets or crab traps. Individuals will either choose to follow the advisory language or not. GBF does feel that reaching any individuals, especially children, has been worth the effort.

Based on the difficulty to recruit the labor necessary to continue to restock flyers at the sign locations, especially beyond grant funding periods, as well as the incidence of flyer holders being damaged by weather or through vandalism, GBF recommends that flyers be instead be solely distributed to indoor locations such as schools and community centers. This would allow more funds to be utilized for additional flyers and other outreach methods. In the case that the recipient organization desires to utilize outdoor flyers at sign locations, GBF recommends that flyers be placed at sign locations in very limited quantities, e.g. in sets of 20, as rainy weather and humidity can cause the flyers to stick together and/or become illegible.

GBF recommends that TPWD collaborate with TDSHS and consider working with retailers and other point-of-sale vendors to provide supplements to TPWD's *Outdoor Annual*, which would better highlight fish consumption advisories and bans to recreational fishermen. As it currently exists, it is easy for fishermen to find at the end of the fishing regulation section. It would be more visible if located next to the bag and length limits table for saltwater, as well as freshwater fish.

GBF recommends that the State of Texas allocate additional funding to perform seafood advisory education outreach on at least at Galveston Bay-wide, or for economies of scale, state-wide so that limited resources of TDSHS and TPWD can be leveraged. Television spots, radio ads, and print media need to be utilized in order for advisory information to be provided to the general public on a broader scale.

Conclusion


GBF feels that the Seafood Consumption Advisory Public Education Campaign was successful in reaching fishermen and crabbers in the Harris County Precinct 2 area, but that a greater effort is needed to reach the broader bay-wide audience via other media. For localized efforts aimed at subsistence fishermen, signs and flyers can be effective.




San Jacinto River Waste Pits

Reported Fishing
Sites within the
3-mile buffer

- A** San Jacinto State Park
- B** Juan Seguin Park
- C** North Ferry Landing
- D** Burnett Bay
- E** River Terrace Park
- F** Interstate 10
- G** Riverside Inn Marina
- H** Wallisville Road
- I** Baytown Nature Center

 Waste Pits

 Reported Fishing Sites



DANGER!

Seafood Consumption Advisory!

Adults:

DO NOT EAT MORE THAN 8 OUNCES OF SPOTTED SEATROUT, CATFISH, OR BLUE CRAB PER MONTH!

Children and women who are nursing, pregnant, or may become pregnant:

DO NOT EAT ANY SPOTTED SEATROUT, CATFISH, OR BLUE CRAB!



For more information:
Galveston Bay Foundation
(281) 332-3381
www.galvbay.org/advocacy_seafood.html

Scan this QR code with your smart phone to go to the webpage:



¡PELIGRO!

¡Advertencia Sobre el Consumo de Mariscos!

Adultos:

¡NO CONSUMIR MÁS DE 8 ONZAS DE TRUCHA, BAGRE O JAIBA AL MES!

Niños o mujeres lactando, embarazadas o que pueden quedar embarazadas:

¡NO CONSUMIR NINGUNA TRUCHA, BAGRE O JAIBA !



Información adicional:
Galveston Bay Foundation
(281) 332-3381
www.galvbay.org/advocacy_seafood.html

Scan this QR code with your smart phone to go to the webpage:



DANGER!

Seafood Consumption Advisory!

Adults:

**DO NOT EAT MORE THAN 8 OUNCES OF ANY FISH
OR BLUE CRAB PER MONTH!**

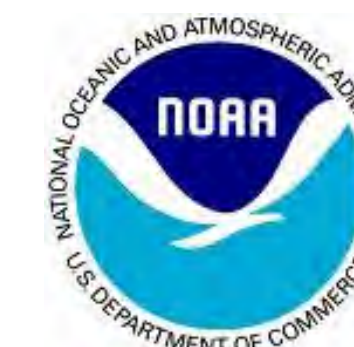
*Children and women who are nursing, pregnant,
or may become pregnant:*

DO NOT EAT ANY FISH OR BLUE CRAB!



**For more information:
Galveston Bay Foundation
(281) 332-3381
www.galvbay.org/advocacy_seafood.html**

Scan this QR code with your smart phone to go to the webpage:



¡PELIGRO!

¡Advertencia Sobre el Consumo de Mariscos!

Adultos:

¡NO CONSUMIR MÁS DE 8 ONZAS DE NINGÚN PESCADO O JAIBA AL MES!

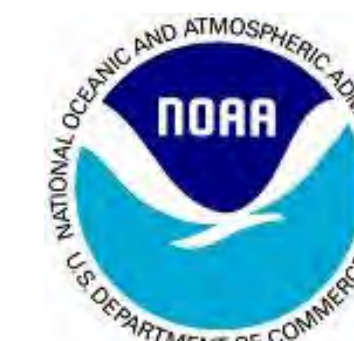
Niños o mujeres lactando, embarazadas o que pueden quedar embarazadas:

¡NO CONSUMAN NINGÚN PESCADO O JAIBA !



Información Adicional:
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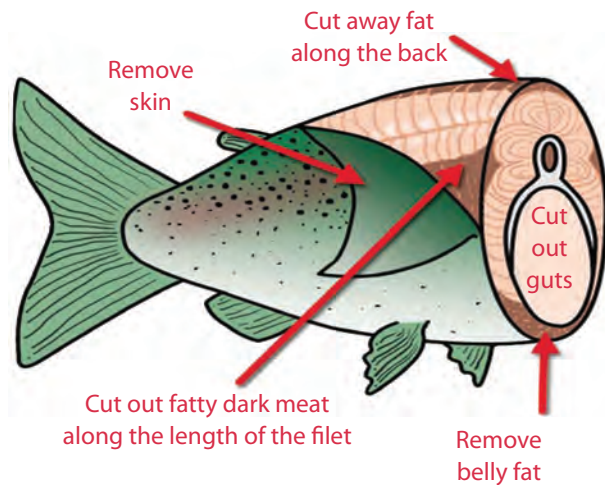
Scan this QR code with your smart phone to go to the webpage:



A Safer Way to Prepare Fish

Dioxin and PCBs are stored mainly in the fat of seafood. You can reduce your exposure to these chemicals by using these techniques:

- From fish, remove the skin, thin layer of fat under the skin, guts, belly fat, fat along the back, and the fatty dark meat along the length of the filet.
- Bake or grill fish. Throw away cooking juices.
- Don't use the whole fish, fat, skin, organs, or juices in soups or stews.
- Don't eat the soft green parts of blue crabs where toxins build up.



DO NOT EAT the skin, fat, and liver of fish and blue crabs from the Houston Ship Channel and Galveston Bay.

You could be exposed to toxic chemicals.

Solving the Problem

In response to the dioxin and PCB problem, the Texas Commission on Environmental Quality (TCEQ) and Houston-Galveston Area Council (H-GAC) initiated a total maximum daily load (TMDL) project in the Houston Ship Channel and Upper Galveston Bay to:

- Pinpoint sources of dioxin and PCBs.
- Develop an action plan to reduce dioxin.

The Houston Ship Channel Stakeholders Group is advising the TCEQ and H-GAC on this project. The group includes representatives from government, industrial facilities, agriculture, business, environmental, and community interests in the Houston Ship Channel and Galveston Bay watersheds.

For More Information



www.dshs.state.tx.us/seafood
512-834-6757



http://galvbay.org/advocacy_seafood.html



www.h-gac.com/dioxintmdl



[www.tceq.state.tx.us/implementation/water/tmdl/
26-houston_group.html](http://www.tceq.state.tx.us/implementation/water/tmdl/26-houston_group.html)

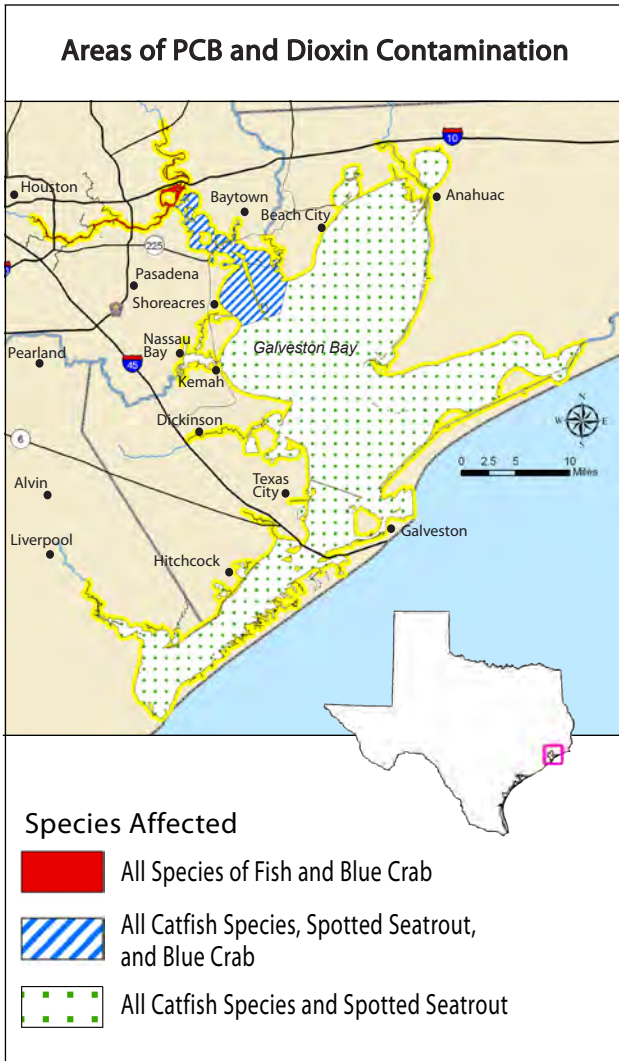
SEAFOOD CAUTION

Fish and Blue Crab SEAFOOD CONSUMPTION ADVISORY



HOUSTON SHIP CHANNEL AND GALVESTON BAY

**PCBs and Dioxin Have Been Found
in Blue Crabs and Fish***
**IN THE HOUSTON SHIP CHANNEL
AND GALVESTON BAY**



*According to The Texas Department of State Health Services

Seafood Consumption Advisory

The Texas Department of State Health Services has issued seafood consumption advisories for the Houston Ship Channel and Galveston Bay.

- Adults should eat no more than one eight-ounce meal per month of seafood from these areas.
- Women who are nursing, pregnant, or who may become pregnant, and children under twelve years old, should not eat seafood from these areas.

Seafood May Contain Dioxin and PCBs

Dioxin is a term for a group of toxic chemicals found throughout the environment. Dioxin has no known constructive use and is a byproduct of certain industrial activities. Exhaust from vehicles, forest fires, and burning trash also release dioxin into the air.

PCBs, or polychlorinated biphenyls, are man-made chemicals. PCB production was banned in the 1970s, however, the chemicals continue to enter the environment through spills, leaks and improper disposal.

Dioxin and PCBs build up in fish as they filter tainted sediment or water, or eat contaminated aquatic life forms.

Exposure to Dioxin and PCBs is Dangerous

Dioxin and PCBs stay in humans and animals for years. Exposure occurs when people eat food with dioxin and PCBs. Pregnant women and nursing mothers are especially susceptible and can pass the contaminants on to their unborn or nursing babies.

Potential Health Problems from Repeated Exposure

- Increased cancer risks
- Immune system issues
- Liver damage
- Thyroid disorders
- Type 2 diabetes
- Digestive tract issues
- Fatigue and headaches
- Skin sores and rashes
- Nerve disorders (motor skill problems)
- Endometriosis and irregular menstrual cycles
- Birth defects
- Reduced fertility
- Child learning and developmental defects

Fish and Blue Crabs that May Contain Dioxin or PCBs

- Fatty fish (like catfish)
- Fish caught near industrial areas

The glands and organs of fish and blue crab caught in the Houston Ship Channel and Galveston Bay may contain high levels of contaminants and should not be eaten.

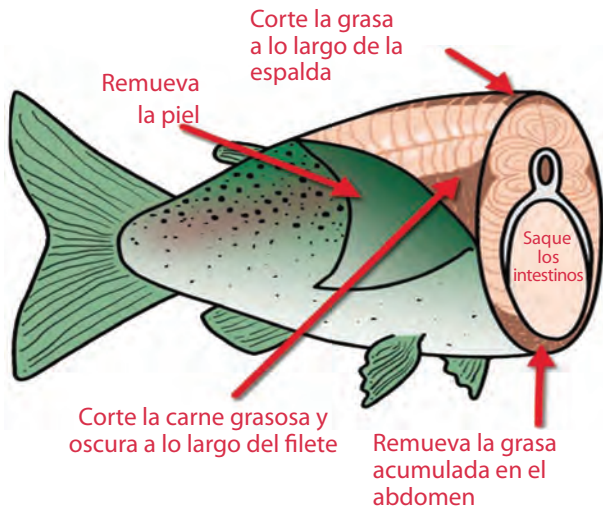
Reduce Your Exposure to Toxins

- Eat fish from a variety of water bodies to reduce risk of exposure to any one contaminant or group of contaminants.
- Eat a mix of different kinds of fish.
- Eat smaller, younger fish. (Younger fish usually have less contaminants than larger, older fish.)
- Practice "catch and release" fishing.

Un modo sano de preparar el pescado

Dioxinas y PCBs se acumulan generalmente en el tejido graso de los mariscos. Usted puede reducir el nivel de exposición usando las siguientes técnicas:

- Remueva la piel, la delgada capa de grasa bajo la piel, los intestinos, la grasa acumulada en el abdomen y en la espalda; y la carne grasosa y oscura a lo largo del filete.
- Hornee o dore el pescado.
- No use el pescado entero, la grasa, la piel o los órganos para sopas o guisos.
- No consuma las partes verdosas y suaves.



NO CONSUMA la piel, el tejido graso, ni el hígado del pescado o jaiba proveniente del Canal De Houston y la Bahía de Galveston.

Usted puede estar expuesto a químicos tóxicos.

Solucionando el Problema

En respuesta al problema relacionado con las dioxinas y PCBs, la Comisión de Calidad Ambiental de Texas (TCEQ) y el Consejo del Área Houston-Galveston (H-GAC), iniciaron el proyecto "Máxima Carga Total Diaria" (TMDL) en el Canal de Houston y La parte norte de la Bahía de Galveston para:

- Identificar la fuente de dióxido y PCB
- Desarrollar un plan para reducir los niveles de dióxido.

El grupo de Actores Interesados en el Canal de Houston está aconsejando a TCEQ y H-GAC en este proyecto. El grupo incluye representantes gubernamentales, instalaciones industriales, agricultoras, de negocios, ambientales e intereses comunitarios en el Canal de Houston y la Bahía de Galveston.

Información Adicional



www.dshs.state.tx.us/seafood
512-834-6757



http://galvbay.org/advocacy_seafood.html



www.h-gac.com/dioxintmdl



www.tceq.state.tx.us/implementation/water/tmdl/26-houston_group.html

ADVERTENCIA SOBRE MARISCOS

PESCADO Y JAIBA

ADVERTENCIA SOBRE EL CONSUMO DE MARISCOS

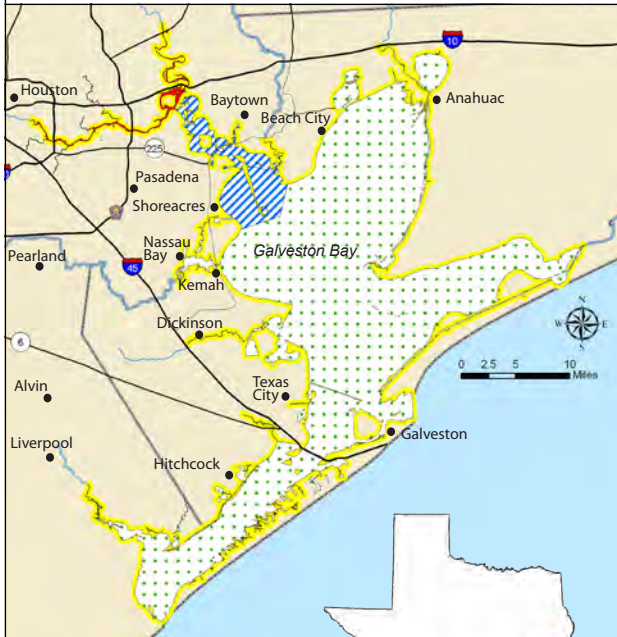


CANAL DE HOUSTON Y LA BAHÍA DE GALVESTON




Dioxinas y Bifenilos policlorados (PCBs) han sido encontrados en jaibas y pescados *

EN EL CANAL DE HOUSTON Y LA BAHÍA DE GALVESTON

Áreas contaminadas con PCBs y Dioxinas



Especies Afectadas

-  Todas las Especies de Pescado, Trucha y Jaiba
-  Todas las Especies de Bagre, Trucha y Jaiba
-  Todas las especies de Bagre y Trucha

* De acuerdo con el Departamento de Servicios de Salud de Texas

Advertencia Sobre el Consumo de Mariscos

El Departamento de Servicios de Salud de Texas ha publicado una advertencia sobre el consumo de mariscos en el Canal de Houston y la Bahía de Galveston.

- Los adultos no deben consumir más de 8 onzas al mes de mariscos provenientes de estas áreas.
- Mujeres lactando, embarazadas o que pueden quedar embarazadas, y niños menores de doce años no deben consumir mariscos provenientes de estas áreas.

Mariscos Pueden Contener Dioxinas y PCBs

Dioxina es un término que hace referencia a un grupo de químicos presentes en el medio ambiente. Esta sustancia no tiene ningún uso constructivo y es el subproducto de algunas actividades industriales. El exhosto de vehículos, incendios forestales y quemas de basura también liberan dioxinas en el aire.

PCBs, o Bifenilos policlorados, son químicos creados por el ser humano. A pesar su producción fue prohibida en 1970, continúan difundándose en el medio ambiente a través de derrames, fugas ó manejo inapropiado de los mismos.

Los PCBs y dioxinas se acumulan en los peces a través de agua y sedimento contaminados o ingestión de otras formas de vida acuática que ya han sido contaminadas.

La exposición a Dioxinas y PCBs es Peligrosa

Las Dioxinas y PCBs permanecen en humanos y animales por años. La exposición ocurre cuando se consume alimentos contaminados con estas sustancias. Mujeres embarazadas o en periodo de lactancia son especialmente vulnerables y pueden transmitir la contaminación al feto o al bebé.

Potenciales Problemas de Salud Relacionados con Exposición

- Problemas del sistema inmunológico.
- Daño del hígado
- Desordenes de la glándula tiroidea
- Diabetes tipo 2
- Problemas con el sistema digestivo
- Fatiga y dolores de cabeza
- Alergias y problemas en la piel
- Desordenes nerviosos (problemas con el sistema motriz)
- Endometriosis y ciclos menstruales irregulares.
- Defectos de nacimiento.
- Defectos en el desarrollo y procesos de aprendizaje.

Pescado y Jaiba Que Pueden Contener Dióxido o PCB

- Pescado grasoso (como el bagre)
- Pescado encontrado cerca a áreas industriales.

Las glándulas y órganos de pescados y jaibas pescados en el canal de Houston y la Bahía de Galveston pueden contener altos niveles de contaminación y no deben ser consumidos.

Reduzca su Exposición a Químicos Tóxicos

- Consuma pescado proveniente de diferentes lugares para reducir el riesgo de exposición a cualquier contaminante.
- Consuma diferentes especies de pescado.
- Consuma pescado pequeño y fresco. (El pescado pequeño y fresco generalmente tiene menos contaminantes que el pescado grande y viejo.



Rio Villa Nature Trail



Wallisville Road Right of Way



Moncrief Park



I-10 Service Road 1



I-10 Service Road 2



I-10 Service Road 3



I-10 Service Road 4



I-10 Service Road 5



I-10 Service Road 6



Market Street 1



Market Street 2



Market Street 3



Market Street 4



Market Street 5



Market Street 6



Market Street 7



Market Street 8



River Terrace Park Bulkhead North



River Terrace Park Bulkhead South



River Terrace Park West



Battleship Texas SHS Upstream of USS Texas



Battleship Texas SHS Downstream of USS Texas



San Jacinto Battleground Association



Juan Seguin Park 1



Juan Seguin Park 2



Juan Seguin Park 3



Juan Seguin Park 4



Lynchburg Ferry North Landing



Lynchburg Ferry South Landing



Burnet Bay North End



Burnet Bay Peninsula



San Jacinto Battleground SHS at North Marsh Trailhead



San Jacinto Battleground SHS at South Marsh Trailhead



Baytown Nature Center 1



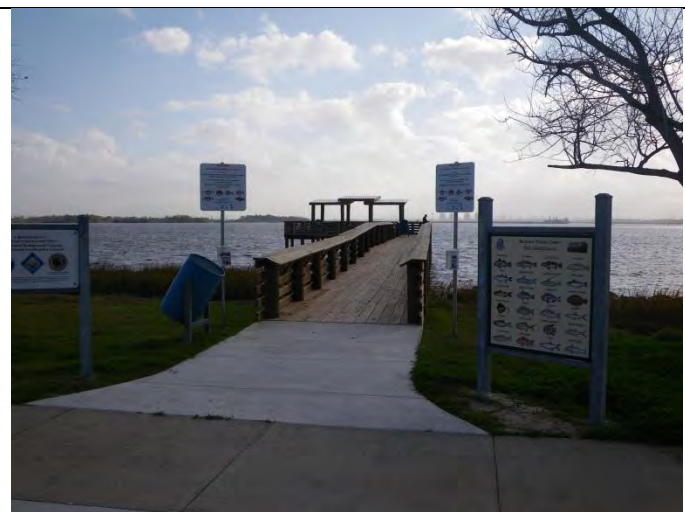
Baytown Nature Center 2



Baytown Nature Center 3



Baytown Nature Center 4



Baytown Nature Center 5



Baytown Nature Center 6



Eddie Gray Wetlands Center Pier

Eddie Gray Wetlands Center Building (inside building)



RTC Property adjacent Goose Creek Park, Baytown



Goose Creek Park Pier



Goose Creek Park Kayak Launch



Roseland Park Fishing Area



Roseland Park Boat Ramp



Bayland Park Boat Ramp



Bayland Park Pier



Britton Park 1



Britton Park 2



Britton Park 3



Britton Park 4



Sylvan Beach Park Boat Ramp



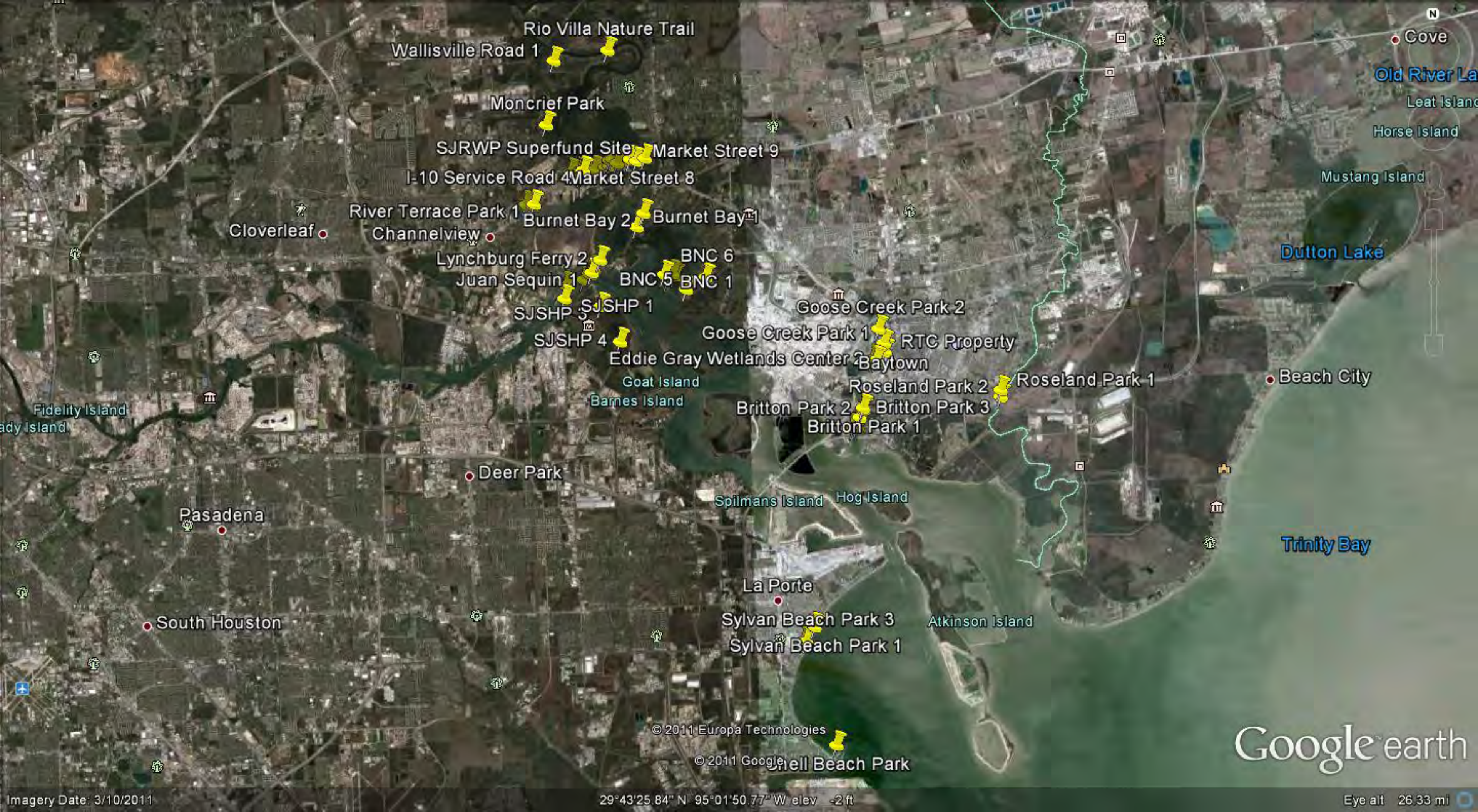
Sylvan Beach Park Boat Ramp Parking Area



Sylvan Beach Park Pier



Shell Beach Shoreacres



Rio Villa Nature Trail
Wallisville Road 1

Moncrief Park

SJRWP Superfund Site
Market Street 9
I-10 Service Road 4
Market Street 8

River Terrace Park 1
Burnet Bay 2
Burnet Bay 1

Lynchburg Ferry 2
Juan Sequin 1
BNC 6
BNC 5
BNC 1

SJSHP 3
SJSHP 1
SJSHP 4

Goose Creek Park 2
Goose Creek Park 1
RTC Property
Baytown
Eddie Gray Wetlands Center

Goat Island
Barnes Island

Britton Park 2
Britton Park 3
Britton Park 1

Roseland Park 2
Roseland Park 1

Deer Park

Spilmans Island
Hog Island

La Porte

Sylvan Beach Park 3
Sylvan Beach Park 1

Atkinson Island

Shell Beach Park

Google earth

Harris County Seafood Consumption Advisory Public Education Campaign
Priority 1 Locations

Upstream to Downstream Location	Entity	Site	Address	City	Specific Location of Sign(s)	Number Signs Upstream of Lynchburg - English	Number Signs Upstream of Lynchburg - Spanish	Number Signs Lynchburg to Upper Bay - English	Number Signs Lynchburg to Upper Bay - Spanish	Number of Posts / Caps / Hardware Needed	Installed	Brochure restocking organization or individual	Notes
1	HCPCT2	Rio Villa Nature Trail	Wallisville Road at Rio Villa Drive	Houston	At trailhead	1	1			2	yes	HCPCT2	http://www.hctx.net/CmpDocuments/2/Parks/Rio%20Villa.pdf
2	HCPCT2	Wallisville Road ROW	Wallisville Road between Smith Street and Rio Villa Drive	Houston	At ROW where cars travel dirt road	1	1			2	yes	HCPCT2	
3	HCPCT2	Moncrief Park	16800 Bear Bayou Drive	Channelview	Adjacent to observation deck	1	1			2	yes	HCPCT2	http://www.hcp2.com/media/pdf/parkmap/moncrief.pdf
4	HCPCT2	I-10 Service Road at San Jacinto River	6 locations between waste pits site and Magnolia Street	Channelview		6	6			12	yes	HCPCT2	Approval received from Austin. Now work with Sergio Rodriguez. Will need special posts. Check to see if HCPCT2 can provide in-kind labor.
5	HCPCT2	Market Street	8 locations between Magnolia Street and end of public road at Glendale Boat Works	Channelview		8	8			16	yes	SJRC	
6	HCPCT2	River Terrace Park	16550 Market Street	Channelview	North end of bulkhead near covered pavillion; south end of bulkhead at boat ramp; west side of footbridge at bayou	3	3			6	yes	SJRC	http://www.hcp2.com/media/pdf/parkmap/riverterrace.pdf
7	TPWD	Battleship Texas State Historic Site	3523 Independence Parkway South	La Porte	Upstream of battleship; downstream of battleship;	2	2			4	yes	SJRC	http://www.tpwd.state.tx.us/publications/pwdpubs/media/park_maps/pwd_mp_p4504_088e.pdf
8	San Jacinto Battle Ground Association	San Jacinto Battle Ground Association	Independence Parkway between SJSHP and Lurchburg Ferry	La Porte	At end of pathway	1	1			2	yes	SJRC	Contact: Cecil Jones, 281-392-1407, 713-857-3187, crjones@cnj-consulting.com

Harris County Seafood Consumption Advisory Public Education Campaign
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Upstream to Downstream Location	Entity	Site	Address	City	Specific Location of Sign(s)	Number Signs Upstream of Lynchburg - English	Number Signs Upstream of Lynchburg - Spanish	Number Signs Lynchburg to Upper Bay - English	Number Signs Lynchburg to Upper Bay - Spanish	Number of Posts / Caps / Hardware Needed	Installed	Brochure restocking organization or individual	Notes
9	HCPCT2	Juan Seguin Park	4407 Independence Parkway	La Porte	At south end of parking lot, SW side of park, NW side of park, N side of park by path.	4	4			8	yes	HCPCT2	http://www.hcp2.com/media/pdf/parkmap/juanseguin.pdf
10	HCPCT2	Lynchburg Ferry	1001 South Lynchburg	Baytown	North and south ferry landings	2	2			4	yes	HCPCT2	
11	HCPCT2	GBF Burnet Bay Restoration Site	Lynchburg Road	Baytown	North end and peninsula			2	2	4	yes	SJRC	
12	TPWD	San Jacinto Battleground State Historic Site	3523 Independence Parkway South	La Porte	north marsh trailhead; south marsh trailhead			2	2	4	yes	SJRC	http://www.tpwd.state.tx.us/publications/pwdpubs/media/park_maps/pwd_mp_p4504_088e.pdf
13	City of Baytown	Baytown Nature Center	6213 Bayway Drive	Baytown	Four fishing piers (San Jacinto Point, Crystal Bay, 2 on Burnet Bay in rec. area) and along Bayshore Drive from entrance to San Jacinto Point.			6	6	12	yes	Lee College	http://www.baytownnaturecenter.org/bnc_information/site_trail_maps.html
14	City of Baytown	Goose Creek Park	#3 Price Street	Baytown	At kayak launch and fishing pier.			2	2	4	yes	Lee College	
15	City of Baytown	RTC Property	West Texas Avenue at Goose Creek (south of Goose Creek Park)	Baytown	At fishing pier.			1	1	2	yes	Lee College	
16	City of Baytown	Eddie V. Gray Wetlands Center	1724 Market Street	Baytown	At base of fishing pier and inside building.			2	2	4	yes	Lee College	
17	City of Baytown	Britton Park	1305 Arizona	Baytown	At 4 floating fishing piers.			4	4	8	yes	Lee College	





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18	City of Baytown	Bayland Park	2641 Missouri Street (Business 146)	Baytown	Boat ramp and fishing pier.			2	2	4	yes	Lee College	
19	City of Baytown	Roseland Park	101 Roseland Drive	Baytown	Boat ramp and fishing area.			2	2	4	yes	Lee College	
20	HCPCT2	Sylvan Beach Park	636 N. Bayshore Drive	La Porte	2 locations near boat ramp; 1 location at base of pier; 1 location at restored beach south of pier.			4	4	8	yes	Galveston BayKeeper - Kathryn Aguilar (kaybay40@hotmail.com)	http://www.hcp2.com/media/pdf/parkmap/sylvanbeach.pdf
21	City of Shoreacres	Shell Beach Park	Miramar and Shore Acres	Shore Acres	At south end of park near HYC			1	1	2	yes	Galveston BayKeeper - Charlotte Wells (baytime@me.com, 281-455-9595)	Contact: David Stall, City Administrator, 281-471-2244, Administrator@cityofshoreacres.us

GALVESTON BAY AREA SEAFOOD CONSUMPTION ADVISORIES

The Texas Department of State Health Services has issued seafood consumption advisories that you should follow to reduce your risk from disease due to the presence of toxic pollutants found in certain species of fish and crab in Galveston Bay and its tributaries. These pollutants, such as dioxins, PCBs, and pesticides are in the environment as a result of spills, leaks, and improper disposal of industrial wastes. As fish and crab eat contaminated prey or filter contaminated sediment or water, the pollutants build up in their bodies.

MAP OF SEAFOOD ADVISORIES IN THE GALVESTON BAY AREA

Map Area	Description of Area	Species Affected	Pollutants
	Houston Ship Channel and adjoining waters upstream of Lynchburg Ferry, including the San Jacinto River below the U.S. Highway 90 bridge.	All species of fish and blue crab.	Dioxin in blue crab and catfish. Organochlorine pesticides and PCBs in all species of fish.
	Houston Ship Channel and adjoining waters downstream of Lynchburg Ferry and Upper Galveston Bay north of a line from Red Bluff Point to Five Mile Cut Marker to Houston Point.	All catfish species, spotted seatrout, and blue crab.	Dioxin in blue crab. Dioxin and PCBs in catfish and spotted seatrout.
	Galveston Bay, including Chocolate Bay, East Bay, West Bay, Trinity Bay, and adjoining waters.	All catfish species and spotted seatrout.	Dioxin and PCBs.
	Clear Creek upstream and west of Clear Lake.	All species of fish.	PCBs.

ADVICE YOU SHOULD FOLLOW TO REDUCE YOUR RISK!

For each of the areas in the Galveston Bay Area shown above except for Clear Creek:

- Adults - DO NOT EAT MORE THAN 8 OUNCES PER MONTH OF THE SPECIES LISTED
- Children - DO NOT EAT ANY AMOUNT OF THE SPECIES LISTED
- Women who are nursing, pregnant, or may become pregnant - DO NOT EAT ANY AMOUNT OF THE SPECIES LISTED

For Clear Creek:

- Everyone - DO NOT EAT ANY AMOUNT OF ANY SPECIES OF FISH FROM THESE WATERS

Scan this QR code with your smart phone to go to the seafood advisory webpage:








For more information: contact the Galveston Bay Foundation at (281)-332-3381 or visit www.galvbay.org/advocacy_seafood.html

ADVERTENCIAS SOBRE EL CONSUMO DE MARISCOS Y PESCADO EN EL AREA DE LA BAHÍA DE GALVESTON

El Departamento de Salud del Estado de Texas ha emitido una advertencia sobre el riesgo del consumo de mariscos y de pescado que usted debe de conocer para evitar el riesgo de contraer enfermedades relacionadas a la presencia de contaminantes tóxicos encontrados en determinadas especies de pescado y de cangrejos (jaibas) en el área de la Bahía de Galveston y sus ríos tributarios. Contaminantes tales como; dioxinas, PCBs y pesticidas se encuentran en el medio ambiente por el manejo de desperdicios industriales que causan derrames y fugas de tóxicos que van a dar al río. Una vez los cangrejos (jaibas) y pescados se alimentan de presas contaminadas o filtran sedimentos contaminados, los tóxicos se van formando en sus cuerpos.

MAPA DE LA ADVERTENCIA DE CONTAMINANTES EN MARISCOS Y PESCADO EN LA BAHÍA DE GALVESTON

	AREA EN MAPA	DESCRIPCIÓN DEL ÁREA	ESPECIES CONTAMINADAS	CONTAMINANTES
		Área del Canal de Houston y aguas adyacentes y río arriba que van del Lynchburg Ferry, incluyendo al Río San Jacinto bajo el Puente US Highway 90.	Todas las especies de pescado y cangrejo azul (jaibas).	Dioxinas en cangrejo azul (jaibas) y bagre ("catfish"). Pesticidas organoclorados y PCBs en todos los tipos de pescado.
		Área del Canal de Houston y aguas adyacentes en las corrientes río abajo que van del Lynchburg Ferry y la parte alta de la Bahía de Galveston en una línea hacia el norte a partir del Red Bluff Point hasta el Five Mile Cut Marker hasta el Houston Point.	Todas las especies de bagre (catfish), trucha manchada (spotted seatrout), y cangrejo azul (jaibas).	Dioxinas en el cangrejo azul (jaibas). Dioxinas y PCBs en el bagre (catfish) y trucha manchada (spotted seatrout).
		Bahía de Galveston, incluyendo Chocolate Bay, East Bay, West Bay, Trinity Bay y aguas adyacentes.	Todas las especies de bagre (catfish) y trucha manchada (spotted trout).	Dioxinas y PCBs.
		Río arriba de Clear Creek y al oeste de Clear Lake.	Todas las especies de pescado.	PCBs.

CONSEJOS QUE DEBES DE SEGUIR PARA REDUCIR EL RIESGO A ENFERMARTE

Para todas las áreas en la Bahía de Galveston excluyendo a Clear Creek:

- **Adultos - NO CONSUMIR MÁS DE 8 ONZAS POR MES DE LAS ESPECIES INDICADAS EN LA LISTA**
- **Niños - NO CONSUMIR NINGUNA DE LAS ESPECIES INDICADAS EN LA LISTA**
- **Mujeres que están lactando, embarazadas ó están en planes de quedar embarazadas - NO CONSUMIR NINGUNA DE LAS ESPECIES INDICADAS EN LA LISTA**

Para el área de Clear Creek:

- **NO CONSUMIR NINGUNA DE LAS ESPECIES DE MARISCOS O DE PESCADO QUE PROVENGAN DE ESTAS AGUAS, CONTAMINACIÓN ALTA**

Escanea este Código con tu teléfono celular para acceder a la página electrónica sobre el aviso de consumo de mariscos y de pescado en el área:



Para información adicional, comunícate al Galveston Bay Foundation; 281.332.3381 o a través de nuestra página electrónica www.galvbay.org/advocacy_seafood.html

Date	Presenters	Event / Organization - Topic	Location	Time	Contact Person / Contact Info	Presentation Length (incl. Q&A); Special Equipment or Other Materials Needed	Number Adults Reached
1/18/2011	Scott	TAMUG Elderhostel - general Galveston Bay	Comfort Suites Inn, 89th Street, Galveston	5:00 PM	Lynne Smith, 409-737-4007, lsmith21727@comcast.net	60 min.	35
2/22/2011	Scott	TAMUG Elderhostel	Comfort Suites Inn, 89th Street, Galveston	5:00 PM	Lynne Smith, 409-737-4007, lsmith21727@comcast.net	60 min.	39
3/17/2011	Scott	BAHEP - GBF, bay, economics and env.	BAHEP, Nassau Bay	8-9:15	Dan Seal, ED, BAHEP, Bob Mitchell, President, BAHEP, 832-536-3255, bob@bayareahouston.com	20 min. incl. Q&A	14
3/24/2011	Scott	League City Senior Citizens	League City Recreation Center (by city pool)	12:15 PM	Lydia Rodriguez, 281-554-1183, Lydia.Rodriguez@leaguecity.com	30 min.	25
3/24/2011	Scott	TAMUG Coastal Zone Management graduate class	TAMUG, OCSB (Bldg #3029), Room 200, Galveston	6:00-8:15 PM	Tom Linton, 409-939-3800	60 min. incl. Q&A	15
4/12/2011	Scott	CCA - Galveston Chapter - hot topics	Knights of Columbus Hall, Galveston	6:00-8:00	Shane Justus, 713-818-6940, sj@coopwood.com	30 min.	30
5/20/2010	Scott	Texas Mariners Cruising Association	Elk's Lodge, 623 Hanson Rd, Kemah, 77565	7:30 PM	Fern Quinonez, a Commodore of TMCA; fern.quinonez@yahoo.com	50-55 min	45
6/8/2011	Scott	Lunar Fins Dive Club - general	5001 Nasa Rd 1	7-7:30 pm	Randy Widaman: 832-264-8047, cap10randy@comcast.net; Fred Toole: fctoole@yahoo.com	45-60 minutes; bring laptop	25
6/25/2011	Scott	Texas Fish & Game Family Fishing Clinic	Fishing Tackle Unlimited	10:30-11:00	Roy Neves, (281) 869-5555, rneves@fishgame.com	30 minutes	15
10/20/2011	Scott	TAEP - Seafood Advisories and Update on the San Jacinto River Waste Pits Superfund Site	Brady's Landing, 8505 Cypress Street, Houston	11:15 arrival, 11:45 lunch, 12:10 meeting	Mike McClellan, 281-922-4766, mikem@corrigan-consulting.com; Jorge Guzman, 713-470-2657, jguzman@environcorp.com	30-40 minutes	60
1/4/2012	Scott	Baytown Rotary Club - Galveston Bay, FWI, SJRWP	Goose Creek Country Club - 5000 Country Club Drive, Baytown	11:45 arrival; 12:25 presentation	John Keeler, 832-283-7766, john.keeler@kelease.com	25 minutes (must end at 12:55)	100

1/17/2012	Scott	TAMUG Elderhostel - general Galveston Bay	Comfort Suites Inn, 89th Street, Galveston	5:00 PM	Lynne Smith, 409-737-4007, lsmith21727@comcast.net	60 min.	35
2/20/2012	Scott	TAMUG Elderhostel - general Galveston Bay (easy on seafood advisories; more on FWI)	Sea Aggie Center	2:00. Arrive at 1:30.	Lynne Smith, 281-460-1139, lsmith21727@comcast.net	60 min.	35
2/21/2012	Scott	TAMUG Elderhostel - general Galveston Bay (easy on seafood advisories; more on FWI)	Comfort Suites Inn, 89th Street, Galveston	12:00 AM	Lynne Smith, 281-460-1139, lsmith21727@comcast.net	60 min.	30
2/28/2012	Scott	Lee College	Baytown	12:30-1:30	Jim Dobberstine	60 min.	15
3/22/2012	Scott	Texas Environmental Health Association - Gulf Coast Chapter - SJRWP and Advisories; Drought Effects	Baytown Community Center, 2407 Market Street, Baytown		Betty Richardson, GCHD, 409 938 2303, 409 770 4040 (cell), brichardson@gchd.org	45 minutes; bring on flashdrive and laptop	75