



Guide to Eating Texas Fish and Crabs

2009 edition



Texas Department of State Health Services
Seafood and Aquatic Life Group
www.dshs.state.tx.us/seafood

The Seafood And Aquatic Life Group would like to thank Tracy Haywood, System Analyst Texas Department of State Health Services, Strategic Preparedness Branch. Without her expertise, knowledge, and commitment to produce a cartographically sound product, this guide would have not been possible.



Cover Photo courtesy of Captain Scott Sparrow, Kingfisher Inn
(Kingfisher Inn Owners, Capitain Randall and Lydia Cawlfieid)
36911 Marshall Hutts Road, Arroyo City/Rio Hondo, Texas 78583, (956) 371-8801
kingfisherinn@lagunamadre.net

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2009 Texas Fish and Crab Consumption Guide

Consumption Advisories, Possession Bans, and Marine Orders

Fish and shellfish in several Texas water bodies contain contaminants at levels that, if consumed, may pose a threat to human health. The Texas Department of State Health Services (DSHS) tests fish and shellfish tissues from Texas public water bodies for contaminants and informs the public of contamination in fish and shellfish by issuing marine orders, possession bans (closures), and consumption advisories. However, the DSHS does not routinely test fish and shellfish tissues in every Texas public water body for contaminants, nor has the DSHS tested fish and shellfish tissues from every public water body in Texas. The DSHS tests fish and shellfish tissues from Texas public water bodies as resources allow.

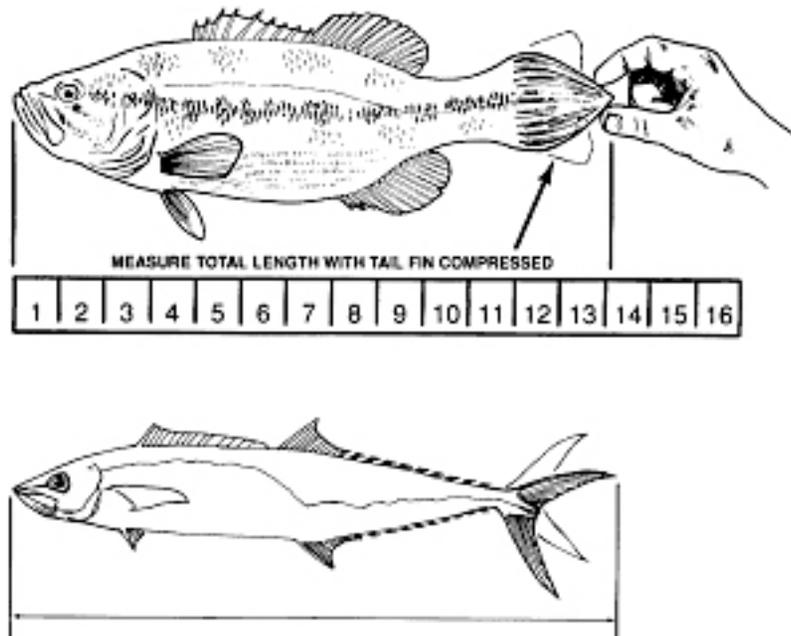
Molluscan shellfish defined as oysters, clams, and mussels pose risks that are different from fish and crabs. Because molluscan shellfish are filter feeders and often eaten raw, a program has been developed to protect consumers. Molluscan shellfish harvest areas are classified on shellfish harvest maps. These maps indicate areas that are approved, conditionally approved, restricted, or prohibited for harvest. Approved and conditionally approved harvest areas open or close based on rainfall, river flow, bacteriological results, presence of biotoxins (e.g. red tide), or illness investigations linked to a harvest area. The opening or closing of approved and conditionally approved harvest areas is directed by DSHS through issuance of a marine order. Restricted and prohibited areas are classified as such based on levels of fecal pollution, human pathogens, or contaminants. DSHS issues a marine order to classify areas as restricted or prohibited. Before harvesting molluscan shellfish individuals should have a current shellfish classification map and determine the status of the approved and conditionally approved harvest areas. To obtain current shellfish classification maps visit our website www.dshs.state.tx.us/seafood or call (512-834-6757). DSHS maintains a 24-hour toll-free phone number (1-800-685-0361) to determine status of approved and conditionally approved harvest areas.

A possession ban prohibits the taking of fish or crabs from a water body where tissue testing indicates the likelihood of a serious or imminent threat to public health. Harvesting fish or crabs from a banned area is a violation of state law enforceable by the Texas Parks and Wildlife Department. A fish or crab consumption advisory issued by the DSHS recommends limited consumption of fish or crabs from a water body because tests found contaminants in fish or crab tissue at unsafe levels. Eating more fish or crabs than recommended by a consumption advisory may pose a potential human health risk, but harvesting fish or crabs from a water body with a consumption advisory is not illegal. The DSHS periodically tests fish and crabs from water bodies with consumption advisories or bans to reevaluate the extent of contamination in fish and crab tissues and study trends.

In this booklet, DSHS provides information on contaminants commonly found in fish and shellfish and provides general consumption guidance to reduce potential health risks from consuming contaminants in fish and shellfish. This booklet, also recommends specific consumption advice for Texas water bodies where tissue testing has identified potential human health risks associated with consuming contaminated fish or crabs.

How to Use This Fish Consumption Guide

- 1) Read the general fish consumption guidelines on the following pages. This advice applies to most waters in Texas.
- 2) Note the name of the water body you are fishing. Check the table of contents or water body index (alphabetically listed) for the water body name.
 - a) Determine the fish species that you've caught.
 - b) Measure your fish from the tip of the nose with jaw closed to the extreme tip of tail with tail fin compressed or turned in a way to obtain maximum overall length.
(The Gulf of Mexico advisory is the only advisory at this time that requires you to determine the length of your catch.)
 - c) Determine the meal advice for the fish you've caught.



- 3) If the water body is not listed in the table of contents or water body index or the fish species that you've caught is not listed under the "Species Affected" for the water body you are fishing, follow the general fish consumption guidelines on the next page.
- 4) Follow recommended fish cleaning and cooking procedures to reduce exposure to some contaminants.



Benefits and Risks of Consuming Fish and Crabs

Fish and crabs are healthful foods that provide a diet high in protein and low in saturated fat and contain nutrients that are important for proper growth and development. Studies have shown that omega-3 fatty acids in fish may reduce the risk of heart disease and stroke and many doctors suggest that eating one to two fish meals each week is helpful in preventing heart disease. However, fish and crabs can accumulate contaminants from the water in which they live or from the food they eat. These contaminants may accumulate to levels that can be harmful to people who eat fish or crabs.

Consumption advisories are not intended to discourage people from eating fish or crab; they are intended to help people make informed decisions on whether they or their families should eat fish or crabs from specific water bodies. Fish and crab consumption advisories recommend consumption guidelines for people based on potential human health risks. People should also use these guidelines to choose fish and crab species and water bodies that contain lower levels of contaminants.

FISH NUTRITION FACTS					
Fish or Seafood (3 oz. Cooked)	Calories (kcal)	Protein (g)	Total Fat (g)	Saturated Fat (g)	Cholesterol (mg)
Blue crab	87	17	2	0.2	85
Channel catfish	89	16	2	0.6	61
Flounder	99	21	1	0.3	58
Freshwater bass (mixed species)	124	21	4	0.9	74
Freshwater drum	130	19	5	1	70
Oysters (fried)	167	7	11	2.7	69
Shrimp (fried)	206	18	10	2	150
Snapper (mixed species)	109	22	1	0.3	40
Spotted seatrout (mixed species)	113	18	4	1	90
Striped bass	105	19	3	0.6	88
Sunfish "Perch"	97	21	1	0.2	73
Tilapia	82	17	1	0.5	42

Source: <http://www.nal.usda.gov/fnic/foodcomp/search/>



General Fish Consumption Guidance for Texas Waters



Eat smaller, younger fish. These fish generally contain lower levels of contaminants than larger, older fish.



Remove skin, dark muscle tissue, and fat from fish. This practice reduces the risk of exposure to many organic contaminants, including PCBs, pesticides, and dioxins that readily accumulate in the fatty tissues.



Fish internal organs may contain high levels of contaminants and should not be eaten.



Eat fish from a variety of water bodies to reduce risk of exposure to any one contaminant or group of contaminants.



Follow the DSHS safe eating guidelines for water bodies listed in this booklet. Eating a few fish meals from any area of concern probably has little or no human health risk, but eating contaminated fish frequently and regularly over a long period of time poses potential human health risks.



The DSHS recommends that people eat some commercially caught fish or that they substitute other sources of lean protein (i.e. chicken, venison, or soy products) for recreationally caught fish.

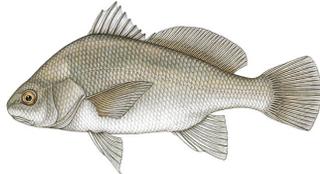


Mercury in Fish You Catch from Texas Waters

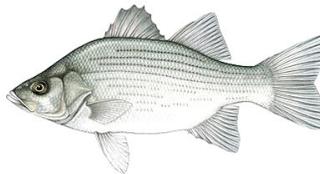
Freshwater fish which are **more** likely to build up mercury.



Largemouth bass
All black bass spp.



Freshwater drum



White bass



Striped bass



Gar species



Walleye

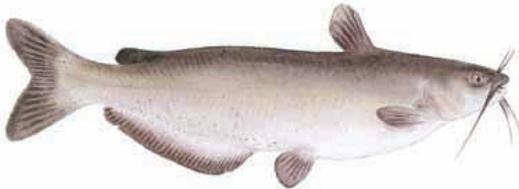


Flathead catfish



Bowfin

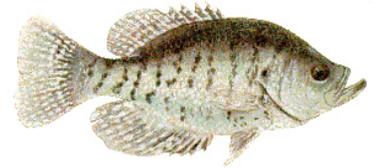
Freshwater fish which are **less** likely to build up mercury.



Channel catfish



Sunfish species
"Perch"

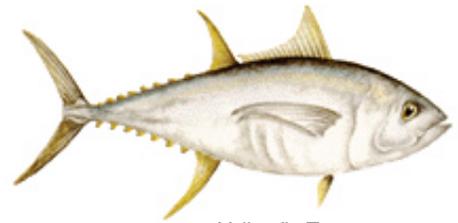


Crappie

Saltwater fish which are **more** likely to build up mercury.



Shark species



Yellowfin Tuna



King mackerel



Cobia "Ling"

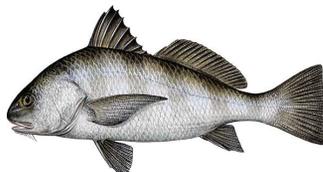


Blackfin tuna

Saltwater fish which are **less** likely to build up mercury.



Red drum



Black drum

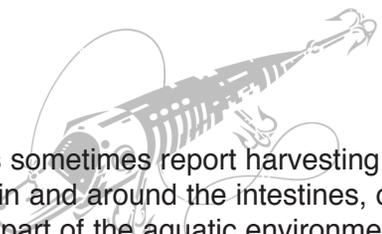


Southern flounder



Spotted seatrout

For freshwater and saltwater fish, which are more likely to build up mercury, DSHS recommends that people eat smaller, younger fish, eat fish from a variety of water bodies, and eat fish, which are less likely to build up mercury more often.



Parasites in Fish

Anglers sometimes report harvesting fish that contain worms, grubs, cysts, or lumps in the flesh, worms in and around the intestines, or a fungus growth on the skin, fins, or gills. Fish parasites are a normal part of the aquatic environment. Common fish parasites include tapeworms, black spot, and yellow grubs. While unpleasant to look at, the edible parts of the fish that contain parasites can be eaten provided they are fully cooked. Parasites are only a problem when fish are eaten that are not thoroughly cooked.

- Do not eat dying or dead fish.
- Thoroughly cook fish to a minimum internal temperature of 145°F.



Red Sores, Lesions, and External Growths

These abnormalities are generally a result of viral or bacterial infections. The appearance of viral or bacterial infections in fish may be unsightly, but there is no evidence to suggest that these infections pose a threat to consumers. Whether or not to eat these fish is a matter of personal choice. Damaged or infected tissue should be removed. Do not eat dying or dead fish.

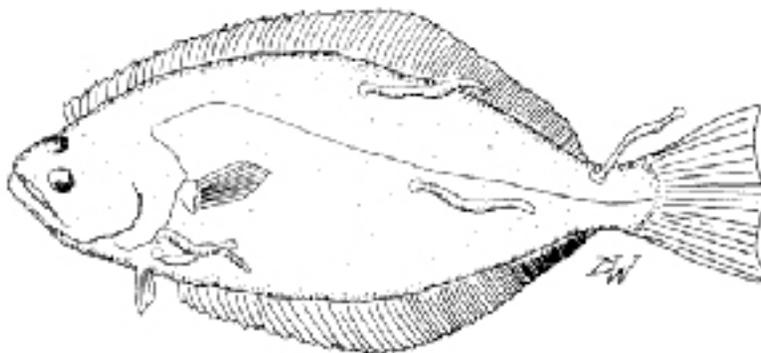
Sources of Information

University of Georgia College of Agricultural & Environmental Sciences Cooperative Extension Service, Angler's Guide to Fish Diseases and Parasites

http://www.wildlifemanagement.info/publications/fish_ponds_2.pdf

University of Florida Institute of Food and Agriculture Sciences

http://edis.ifas.ufl.edu/TOPI_C_Fish_Health



Consumption Guidance for Purchased Fish

What are the contaminant levels of fish bought in supermarkets and restaurants? The United States Food and Drug Administration (FDA) has the authority to set contaminant tolerance levels to regulate the interstate sale of fish. In March 2004, the FDA and United States Environmental Protection Agency (EPA) issued a joint consumer advisory on mercury in fish. The FDA/EPA consumer advisory recommends women who may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish and eat fish and shellfish that are lower in mercury.

FDA/EPA Consumer Advice (March 19, 2004)
<http://www.cfsan.fda.gov/~dms/admehg3.html>

1. Do not eat shark, swordfish, king mackerel, or tilefish because they contain high levels of mercury.
2. Eat up to 12 ounces (2 average meals) a week of a variety of fish and shellfish that are lower in mercury.
 - a. Five of the most commonly eaten fish that are low in mercury are shrimp, canned light tuna, salmon, pollock, and catfish.
 - b. Another commonly eaten fish, albacore “white” tuna has more mercury than canned light tuna. So when choosing your two meals of fish and shellfish, you may eat up to 6 ounces of albacore tuna per week.
3. Check local advisories about the safety of fish caught by family and friends in your local, lake, rivers, and coastal areas. If no advice is available, eat up to 6 ounces per week of fish you catch from local waters, but don't consume any other fish during that week.

Please visit the FDA on the web <http://www.cfsan.fda.gov/seafood1.html> for more information regarding the FDA Seafood Program and what commercial fish species are safest to eat.

The table below provides general guidance on which commercial fish species to eat more often.

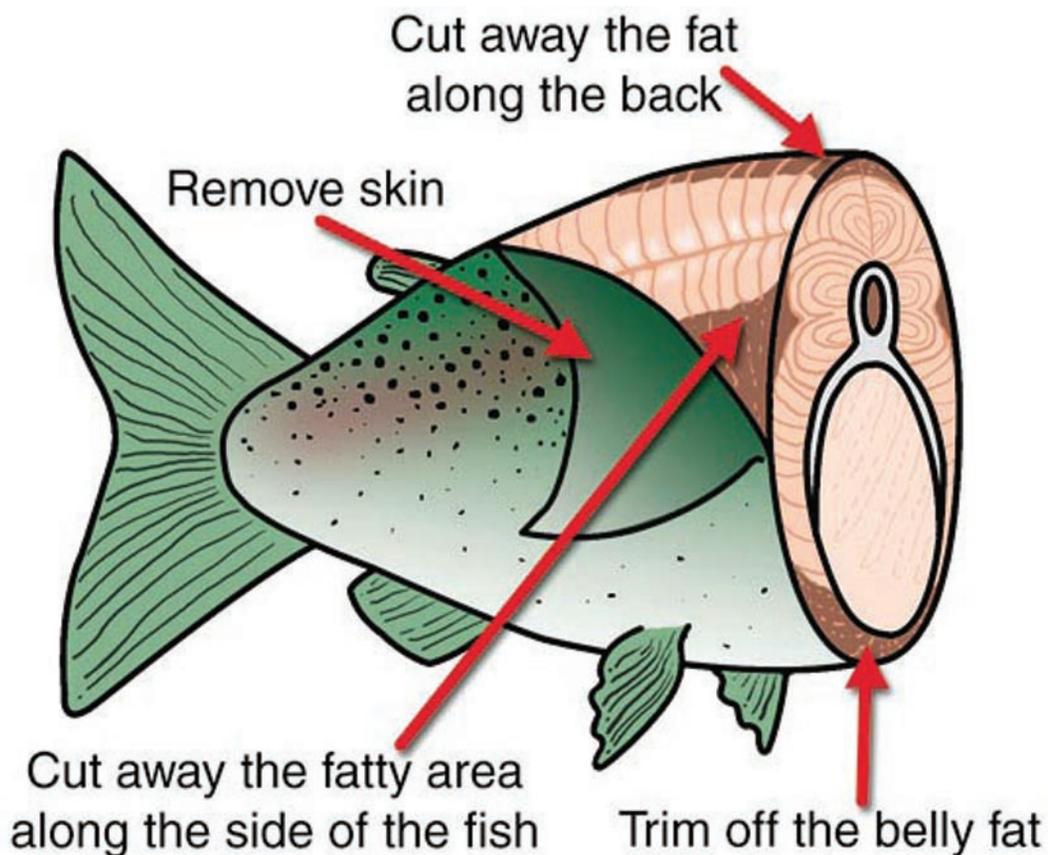
Commercial Fish Species		
Eat More of These		Eat Less or None of These
Anchovies	Ocean Perch	Swordfish
Catfish	Pollock	Shark
Cod	Salmon	King mackerel
Crawfish	Sardines	Tilefish
Flounder	Shellfish (oysters, shrimp, clams, scallops, crab, and lobster)	Tuna steak
Haddock	Tilapia	Albacore “white” tuna (canned)
Hake	Trout	Marlin
Herring		
Light tuna (canned)		

Clean and Cook Fish Properly to Reduce Exposure

Contaminants such as PCBs, pesticides (i.e. DDT, chlordane, toxaphene, and dieldrin), and dioxins readily accumulate in the fatty tissues of fish. To reduce exposure to these contaminants, the skin, dark (reddish-color) muscle tissue, and fatty portions (i.e. belly fat, side fat, and fat along the top of the back) of the fish should be removed before cooking (diagram). The DSHS recommends baking or broiling skinned, trimmed fish on a rack or grill to allow fat to drip away from the fillet. If fish are fried, the frying oil should not be reused. These cooking methods will reduce exposure to many of the most common organic contaminants in fish.

Mercury accumulates primarily in the muscle tissue (fillet) of the fish. While most all fish contain some level of mercury, long-lived, predatory fish (fish that eat other fish) such as freshwater fish largemouth bass, freshwater drum, gar, pike, and walleye and saltwater fish such as king mackerel, shark, and swordfish contain more mercury than small fish. Trimming skin and fat and cooking method do not reduce mercury exposure. The only way to reduce mercury exposure is to reduce consumption of contaminated fish. Thus, the DSHS recommends eating smaller, younger fish that have had less time to accumulate mercury in their tissues.

No studies are available to determine whether removing skin, trimming fat, and cooking reduce volatile organic compounds in fish tissue. The Texas Department of State Health Services recommends that fish containing these contaminants not be eaten.



Water Bodies Tested by the Texas Department of State Health Services Where No Consumption Advisories or Bans Were Issued

The following table contains water bodies that have been tested by the Texas Department of State Health Services for environmental chemical contaminants in fish tissue from 1993 to 2007. Eating fish or crabs from these water bodies poses **no** apparent public health hazard.

The laboratory chemical contaminant tests (analyses performed), listed in the table by water body are defined by the following codes:

Metals:

Ag = Silver	Cd = Cadmium	Mn = Manganese	Sn = Tin
Al = Aluminum	Co = Cobalt	Mo = Molybdenum	Sr = Strontium
As = Arsenic	Cu = Copper	Ni = Nickel	U = Uranium
B = Boron	Cr = Chromium	Pb = Lead	V = Vanadium
Ba = Barium	Fe = Iron	Sb = Antimony	Zn = Zinc
Be = Beryllium	Hg = Mercury	Se = Selenium	

Dioxin = Dibenzodioxins and Dibenzofurans

SVOCs = Semivolatile Organic Compounds

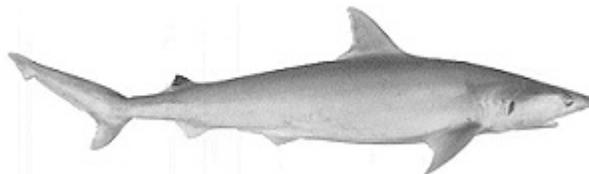
Pest = Pesticides; PCBs = Polychlorinated Biphenyls

VOCs = Volatile Organic Compounds.

Water Body	Date	County(s)	Analyses Performed
Bastrop Bay	12/1999	Brazoria	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Dioxin, Pest, PCBs, SVOCs, VOCs
Bouton Lake	6/2006	Jasper	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Boykin Springs	6/2006	Jasper	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Brakes Bayou (Beaumont, TX)	11/1993	Jefferson	Metals: As, Cd, Cu, Hg, Pb, Zn Pest, PCBs, SVOCs, VOCs
Brakes Bayou (Beaumont, TX)	5/1995	Jefferson	Pest, PCBs
Brandy Branch Reservoir	3/2003	Harrison	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Brazos River (Freeport, TX)	4/1996	Brazoria	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Brownsville Ship Channel	4/1997	Cameron	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Cement Creek Lake (Fort Worth, TX)	4/1995	Tarrant	Metals: As, Cd, Hg, Pb, Zn Pest, PCBs, SVOCs, VOCs
Christmas Bay	12/1999	Brazoria	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Dioxin, Pest, PCBs, SVOCs, VOCs
Clear Creek	9/2000	Harris & Galveston	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Como Lake (Fort Worth, TX)	11/2005	Tarrant	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Lake Conroe	6/1996	Montgomery & Walker	Hg
Creek Bend Resaca	5/1996	Cameron	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs

Water Body	Date	County(s)	Analyses Performed
Delta Lake	7/1993	Hidalgo	Metals: As, Cd, Cu, Hg, Pb, Zn Pest, PCBs
Drum Bay	12/1999	Brazoria	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Dioxin, Pest, PCBs, SVOCs, VOCs
Forest Park Lake (Henderson, TX)	10/2005	Rusk	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
French Lake (Fort Worth, TX)	4/1995	Tarrant	Metals: As, Cd, Hg, Pb, Zn Pest, PCBs, SVOCs, VOCs
Hidalgo Irrigation System	5/1996	Hidalgo	Metals: As, Cd, Cu, Hg, Pb, Zn Pest, PCBs
Hidden Valley Resaca	5/1996	Cameron	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Lake Houston	4/1998	Harris	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Joe Pool Reservoir	8/1994	Tarrant, Ellis, and Dallas	Metals: As, Cd, Cu, Hg, Pb, Zn Pest, PCBs, SVOCs
Lake O' the Pines	8/1994	Marion, Upshur, & Morris	Metals: As, Cd, Cu, Hg, Pb, Zn Pest, PCBs
Lavaca Bay (outside closure area)	4/1996	Calhoun	Hg
Lavaca Bay (Keller Bay)	4/1996	Calhoun	Hg
Lake Livingston	2/1994	Polk & Trinity	Metals: As, Cd, Cu, Hg, Pb, Zn Pest, PCBs, SVOCs, VOCs
Mabel Davis Park Pond (Austin, TX)	6/2000	Travis	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Lake Madison (Madisonville, TX)	11/2000	Madison	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, and VOCs
Martin Creek Reservoir	11/2002	Rusk & Panola	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Mercedes Irrigation System	7/1993	Hidalgo	Metals: As, Cd, Cu, Hg, Pb Zn Pest, PCBs
Moss Lake	10/2005	Cooke	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Lake Nacogdoches	6/2002	Nacogdoches	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Neches River	6/1995	Jasper & Hardin	Dioxin, Pest, PCBs
Neches River	6/1995	Jefferson & Orange	Metals: As, Cu, Hg, Pb, Zn Pest, PCBs, SVOCs, VOCs
Nueces Bay	3/2005	Nueces	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
O.H. Ivie Reservoir	9/2005	Coleman, Concho, & Runnels	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Old Brazos River Channel	12/1998	Brazoria	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs

Water Body	Date	County(s)	Analyses Performed
Lake Palestine	11/1996	Henderson & Cherokee	Hg
Lake Raven (Huntsville State Park)	11/2000	Walker	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Red Bluff Reservoir	6/2001	Reeves & Loving	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Rio Grande River	4/1999	Webb	Metals: Ag, Al, As, Ba, B, Cd, Co, Cr, Fe, Hg, Mn, Mo, Ni, Pb, Sb, Se, Sr, U, V, Zn, Pest, SVOCs
Rio Grande River	4/2001	Brewster & Presidio	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Rio Grande River	6/2001	Hidalgo & Cameron	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Sabine Lake	6/1994	Jefferson	Metals: As, Cd, Cu, Hg, Pb, Zn Dioxin, Pest, PCBs, SVOCs, VOCs
San Antonio River	4/1998	Bexar & Wilson	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Sulphur River	6/1993	Bowie & Cass	Metals: As, Cd, Cu, Hg, Pb, Zn Dioxin, Pest, PCBs, SVOCs, VOCs
Lake Tawakoni	4/2000	Hunt, Rains, & Van Zandt	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Taylor Bayou (Port Arthur, TX)	8/1994	Jefferson	Metals: As, Cd, Cu, Hg, Pb, Zn
Lake Timpson (Timpson, TX)	5/2002	Shelby	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Town Lake	9/1998	Travis	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Twin Lake (Lytle, TX)	2/1997	Medina	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Waco Lake	6/2005	McLennan	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Welsh Reservoir	3/2003	Titus	Metals: As, Cd, Cu, Hg, Pb, Se, Zn Pest, PCBs, SVOCs, VOCs
Lake Wright Patman	7/1997	Bowie & Cass	Hg



Contaminants of Concern

Mercury

Mercury is a naturally occurring element distributed throughout the environment by natural processes and human activities. Mercury is released into the air when rocks erode, soils decompose, and volcanoes erupt. However, 70% of the total annual mercury releases to the environment are from human activities. Most mercury releases to the air occur when people burn fossil fuels or incinerate solid waste. Other sources of environmental mercury include mining, smelting, chlor-alkali and cement production, and other industrial processes that use mercury. Mercury is also released to surface waters from pulp and paper mills, leather tanning, electroplating, chemical manufacturing, and wastewater treatment facilities. Airborne mercury is an indirect source of mercury, reaching surface waters and soils through precipitation. Mercury also enters surface waters through disturbed lake or river sediments (e.g. flooding, dredging). Sources of mercury in soil include fertilizers, fungicides, solid waste (e.g. batteries, electrical switches, thermometers, fluorescent light bulbs), municipal incinerator ash placed in landfills, and from application of sewage sludge to cropland. Microorganisms in the aquatic environment convert inorganic mercury to methyl mercury. This chemical change occurs more readily in acidic waters with high levels of organic matter. Methyl mercury accumulates in fish and is passed up the food chain: small fish eat methyl mercury in insects and microscopic animals; larger fish then eat methyl mercury in the smaller fish, and finally people consume methyl mercury when they eat larger fish. Fish at the top of the aquatic food chain (e.g. freshwater fishes largemouth bass, freshwater drum, gar, pike, and walleye and marine fishes such as king mackerel, shark, and swordfish) may contain methyl mercury levels 1 to 10 million times greater than those found in the surrounding water. Eating fish that contain methyl mercury can damage the brain and other parts of the nervous system. The greatest health risk from methyl mercury may be to the unborn baby. The unborn baby may be at particular risk of irreversible nervous system damage from mercury. Unborn babies, infants, and children are more sensitive to methyl mercury than adults because the brain and other parts of the nervous system are not completely developed. Symptoms of prolonged exposure to high levels of methyl mercury may include tingling of the skin, loss of coordination, visual and hearing impairment, and slurred speech. Infants and children exposed to very high levels of methyl mercury may exhibit neurological symptoms similar to those of cerebral palsy, but most of the neurological developmental effects of low level exposure to methyl mercury are, in all likelihood, subtle effects.

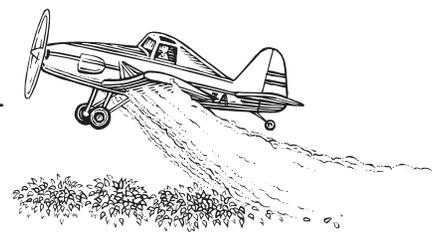


Polychlorinated Biphenyls (PCBs)

PCBs are synthetic (man-made) substances once used commercially in electrical transformers, carbonless copy papers, cutting oils, and hydraulic fluids. PCBs may also enter the environment through many other industrial and commercial uses. In 1979, The United States Environmental Protection Agency (EPA) banned the manufacture of PCBs in the United States. However, the EPA did not require removal of PCB-containing materials still in service at the time of the ban. Therefore, some materials remain in use today. The major source of environmental PCBs in the United States today is from ongoing use, storage, and disposal of products in landfills or improper disposal of products that contain PCBs. PCBs also may be released from sediments disturbed by flooding, dredging, and other activities. PCBs have been found in soil, ground



and surface water, air, sediment, plants, and animals in all regions of the world. PCBs break down very slowly in the environment and accumulate in fatty tissue, skin, and internal organs of fish and other animals. Levels of PCBs in fish may be 2,000 to 1,000,000 times greater than levels in the surrounding water. The amount of PCBs found in fish varies with species, age, size, fat content, diet, and surface water concentrations. Larger, older fish will generally contain higher levels of PCBs than smaller, younger fish; fatty fish such as carp, buffalo, catfish, and spotted seatrout may contain higher levels of PCBs than lean fish such as largemouth bass, walleye, crappie, and red drum. Eating fish that contain PCBs may cause infants of women who have eaten many contaminated fish to have lower birth weights, delayed physical development, and learning difficulties. PCBs may affect the immune system, reproductive organs, skin, stomach, thyroid, kidney, and liver and may increase the risk of cancer.



DDT, DDE, and DDD

DDT is a chlorinated pesticide once widely used to control insects on agricultural crops and insects that carry diseases such as malaria and typhus. DDT enters the United States environment as a result of past use as an insecticide and releases from waste sites. The EPA banned the pesticide in 1972. However, DDT continues to enter the environment because many areas of the world still use this pesticide. In the environment, DDT and its break down products DDE and DDD are long-lived chemicals that accumulate in the fatty tissue, skin, and internal organs of fish and other animals. Thus, DDT, DDE, and DDD levels can be much higher in fish tissue than in water or soil. Eating fish that contain DDT or its break down products may damage the nervous system, affect reproductive and liver function, and may increase the risk of cancer.

Chlordane

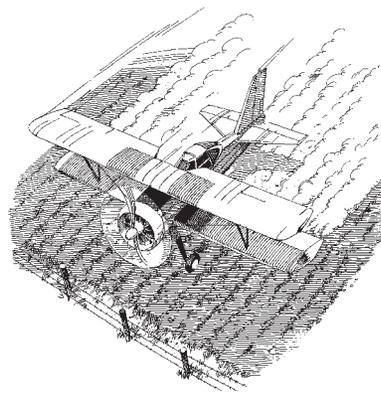
Chlordane is a man-made pesticide used in the United States from 1948 to 1988. Before 1978, chlordane was used as a pesticide on agricultural crops, lawns, gardens, and as a fumigating agent. Between 1978 and 1983, the EPA phased out above-ground uses of chlordane. From 1983 until 1988, chlordane's only approved use in the United States was for termite control. In 1988, because of human health concerns, the EPA banned all uses of chlordane in the United States. Chlordane breaks down very slowly in the environment and accumulates in the fatty tissue, skin, and internal organs of fish and other animals. Chlordane remains in our food supply because its widespread use on agricultural crops in the 1960s and 1970s contaminated agricultural soil. Chlordane can harm the nervous system, digestive system, endocrine system, and liver. Even at doses that cause no anatomical damage, chlordane may cause behavioral disorders in infants exposed before birth or while nursing. Chlordane may also cause cancer.

Toxaphene

Toxaphene, introduced in 1947, was probably the most heavily used pesticide in the United States during the 1970s. Toxaphene was primarily used in the southern United States to control insect pests on cotton and other crops. Toxaphene was also used to control insect pests on livestock and to kill unwanted fish in lakes. In the United States, the EPA banned toxaphene for most uses in 1982. From 1982 until 1990, when the EPA banned all uses of toxaphene in the United States, toxaphene was approved only for use on livestock and for insect control emergencies. Toxaphene enters surface waters through soil runoff, direct application as a pesticide, wastewater release from manufacturing facilities, and through disposal of waste pesticides. Toxaphene is a long-lived chemical in the environment that accumulates in fatty tissue, skin, and internal organs of fish and other animals. Eating fish that contain toxaphene may cause degenerative changes to the liver, kidney, and nervous system. Toxaphene may also cause cancer.

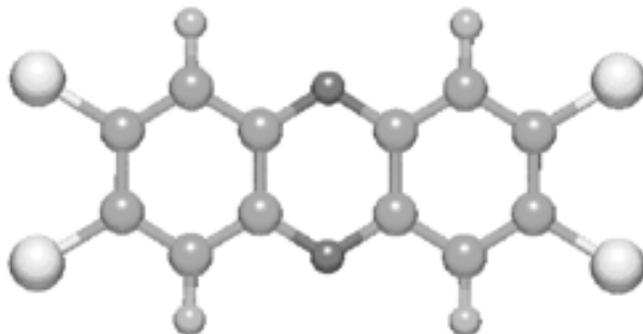
Aldrin and Dieldrin

Dieldrin is a pesticide that is also a break-down product of the chlorinated pesticide aldrin. Dieldrin was widely used as a pesticide on corn, cotton, and citrus crops between 1950 and 1974. Dieldrin was also used to control locusts, mosquitoes, and termites. In 1970, the United States Department of Agriculture canceled all agricultural uses of dieldrin in the United States. Dieldrin was used to control termites until 1987, when all uses were banned in the United States by the EPA. Aldrin and dieldrin are no longer produced in the United States. Dieldrin enters the environment through past uses and accidental spills or leaks from storage containers at disposal sites. Once dieldrin is in the environment, it attaches to soil and lake or river sediments and breaks down very slowly. Dieldrin is long-lived in the environment and accumulates in the fatty tissue, skin, and internal organs of fish and other animals. Eating fish containing dieldrin may decrease the effectiveness of the human immune system, increase infant mortality, reduce reproductive success, cause birth defects, damage kidneys, and may cause cancer.



Chlorinated Dibenzodioxins and Dibenzofurans (Dioxin)

Dioxins are formed as unintentional by-products of many industrial processes, incomplete combustion, and various chemical production processes. Dioxins are also natural products of forest fires and possibly other natural processes, but these sources are small compared to dioxins produced by human activity. Human activities that produce dioxins include combustion of fossil fuels, wood, and municipal and industrial waste. The bleaching process in pulp and paper production and the manufacture of some chlorinated chemicals produce dioxins. Dioxins have been found in soil, surface water, lake and river sediments, and plant and animal tissue in all regions of the world. Dioxins are extremely long-lived in the environment and readily accumulate in fish and other animal tissues. Levels of dioxins found in fish and other animal tissues may be hundreds to thousands of times greater than levels found in surrounding waters or sediments. Eating fish containing dioxins may cause chloracne, a severe skin disease with acne-like lesions that appear on body; dioxins may cause other skin rashes, skin discoloration, and excessive body hair. Dioxins may also cause liver damage, weight loss, reproductive damage, and birth defects. Dioxins may weaken the immune system, disrupt the endocrine system, and may increase the risk of cancer in humans.



Volatile Organic Compounds (VOCs)

VOCs are used to make many products, especially plastics and solvents. Generally, these compounds do not accumulate in fish and animals. VOCs are usually found in fish at the same levels as those in the surrounding waters. Most VOC contamination is due to a direct discharge of these compounds to surface waters. Eating fish containing VOCs may cause cancer in animals and humans.

Sources of Information

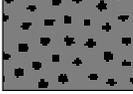
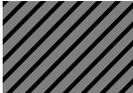
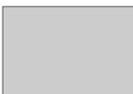
United States Environmental Protection Agency (EPA) Chemical Fact Sheets
<http://www.epa.gov/waterscience/fish/technical/chemfacts.html>

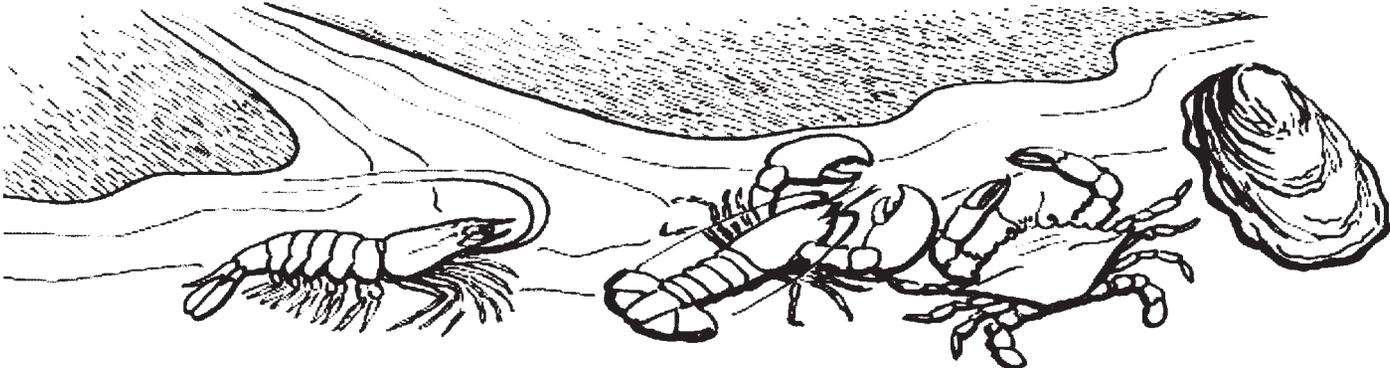
Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs
<http://www.atsdr.cdc.gov/toxfaq.html>

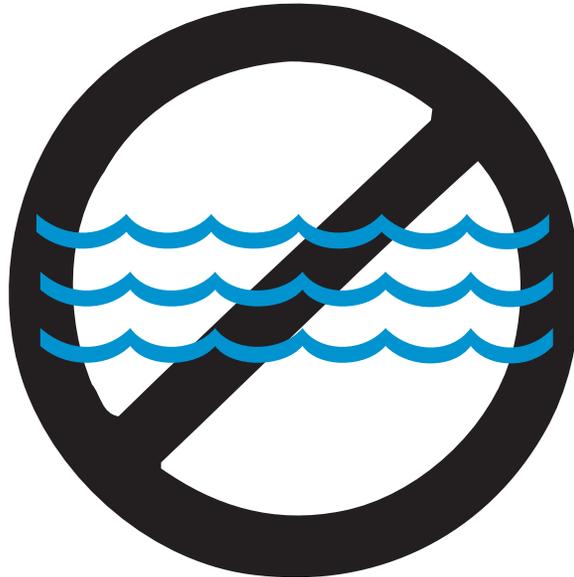
Agency for Toxic Substances and Disease Registry (ATSDR) Public Health Statements
<http://www.atsdr.cdc.gov/phshome.html>



Map Key

● ◇	Place		Water body		Prohibited
—+—+—	Railroad		Water body		Prohibited
—	River/Stream		Water body		Advisory
—	Major Road		Water body		Rescinded
—	Minor Road		Water body		Rescinded
	Park/ Forest				
	County Boundary				
	State Boundary				





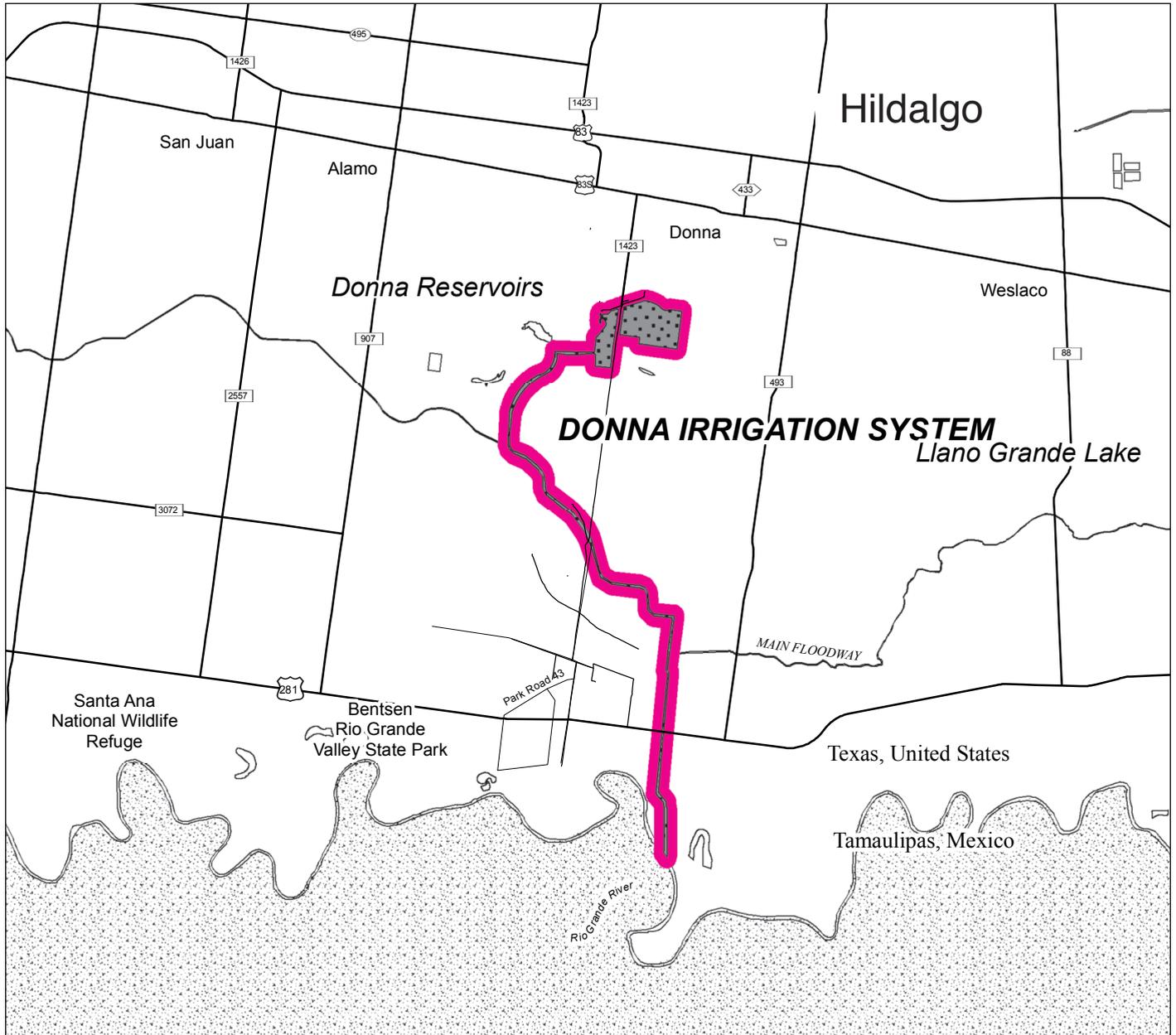
Prohibited Waters

Taking or possessing fish or crabs from prohibited waters is a violation of state law enforceable by the Texas Parks and Wildlife Department. Catch and release fishing is legal on prohibited waters.

Donna Irrigation System

Hidalgo County

AL-9 Issued February 4, 1994



Prohibited Area:

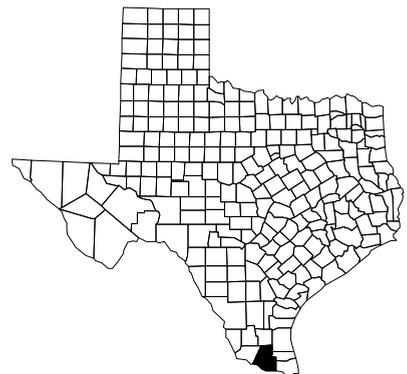
Donna Reservoir and interconnecting canal system

Contaminants of Concern:

Polychlorinated Biphenyls (PCBs)

Restricted Species:

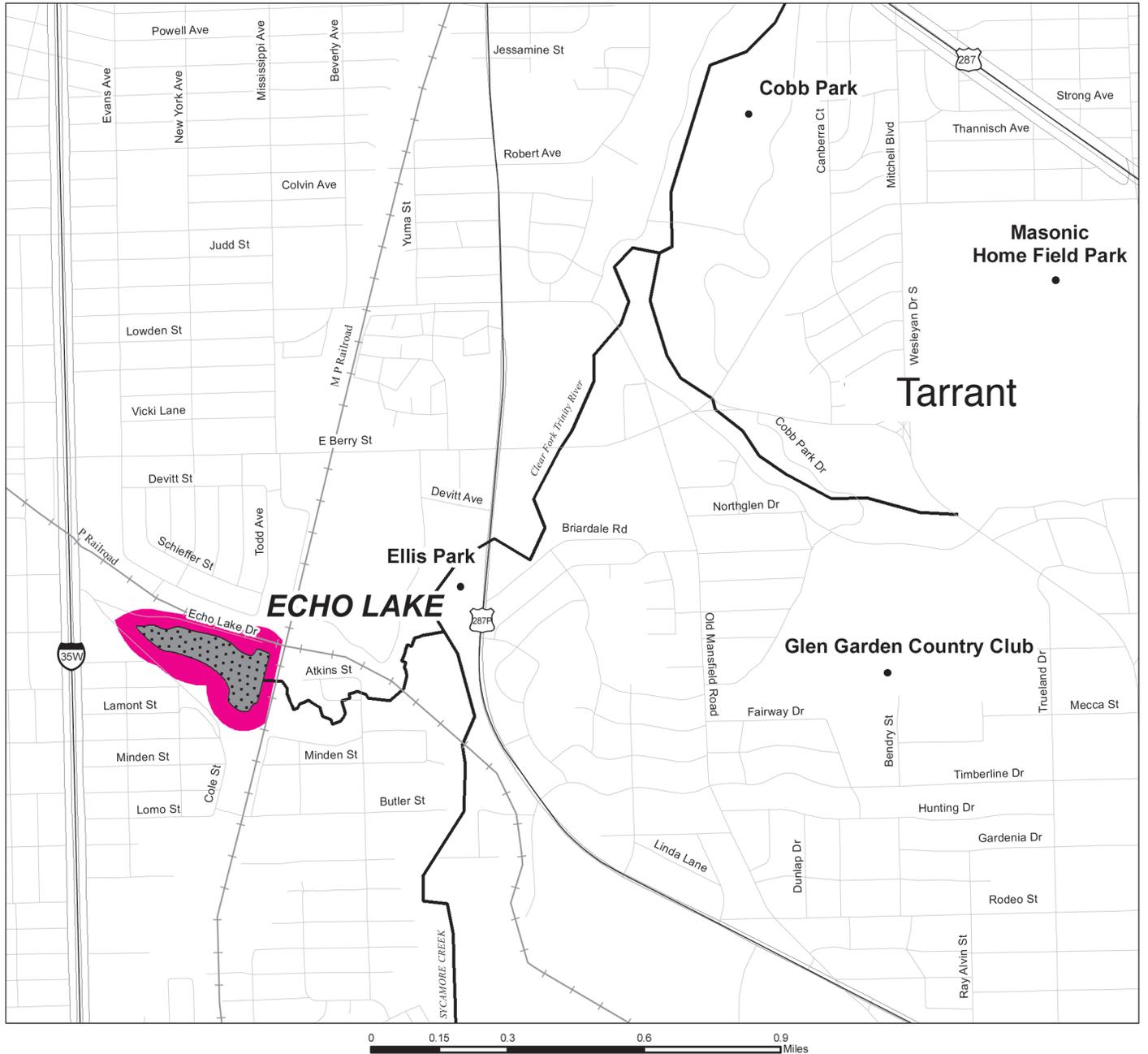
Persons are prohibited from possessing any species of fish from these waters.



Echo Lake

Tarrant County

AL-11 Issued December 5, 1995



Prohibited Area:

Echo Lake

Contaminants of Concern:

Polychlorinated Biphenyls (PCBs)

Restricted Species:

Persons are prohibited from possessing any species of fish from these waters.

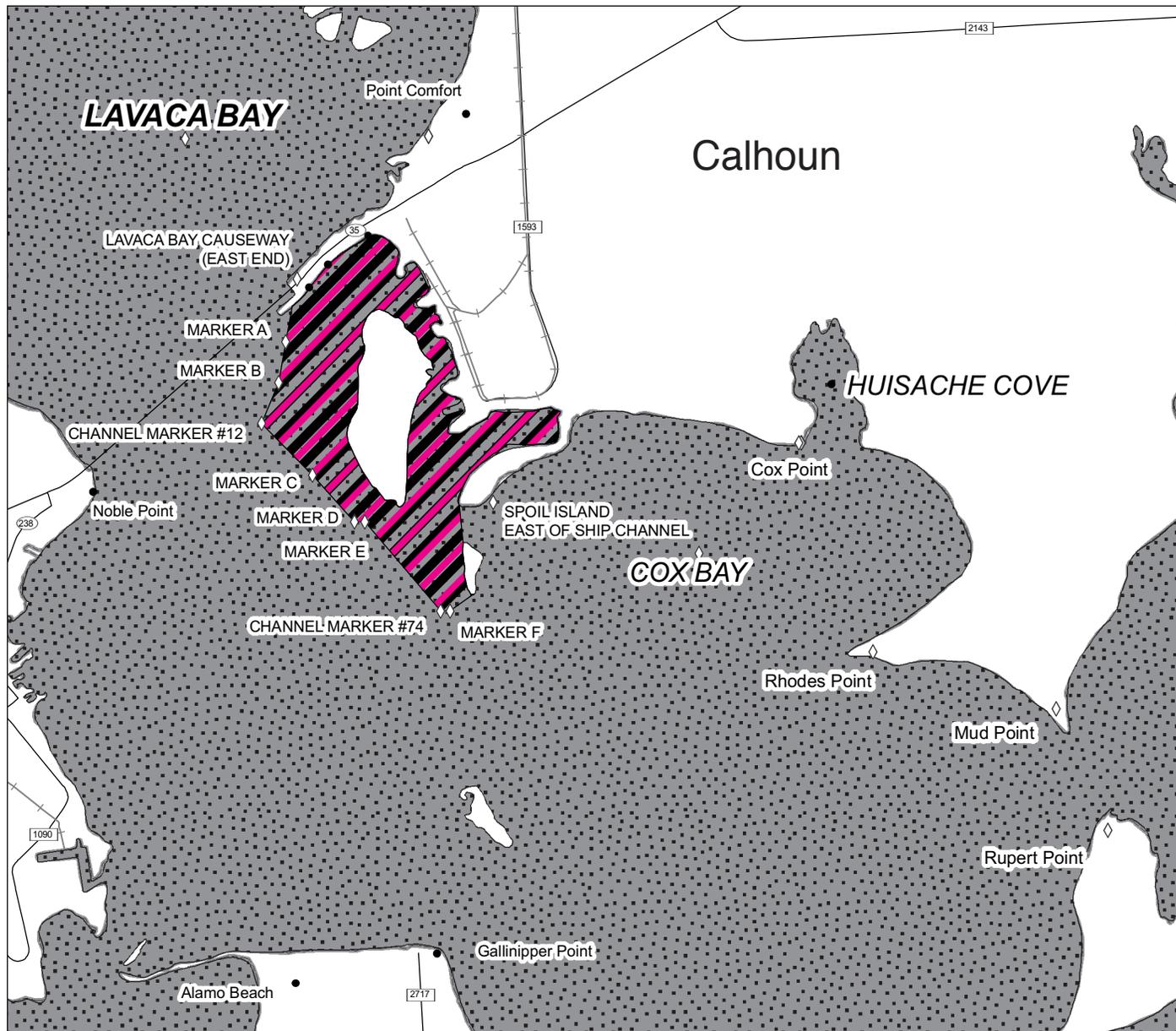


Lavaca Bay (upper)

Calhoun County

AL-1 Issued April 21, 1998

AL-13 Modification issued January 13, 2000



Prohibited Area:

That area of Lavaca Bay inshore of a line beginning at the last point of land at the northeastern approach of the Lavaca Bay Causeway, then in a southwest direction to Aquatic Life Marker A to Aquatic Life Marker B to Channel Marker #12, then in a southeastern direction to Aquatic Life Marker C to Aquatic Life Marker D to Aquatic Life Marker E to Channel Marker #74, then in a northeastern direction to Aquatic Life marker F to the outhernmost point of land on the spoil island east of the ship channel

Contaminant of Concern:

Mercury (Hg)

Restricted Species:

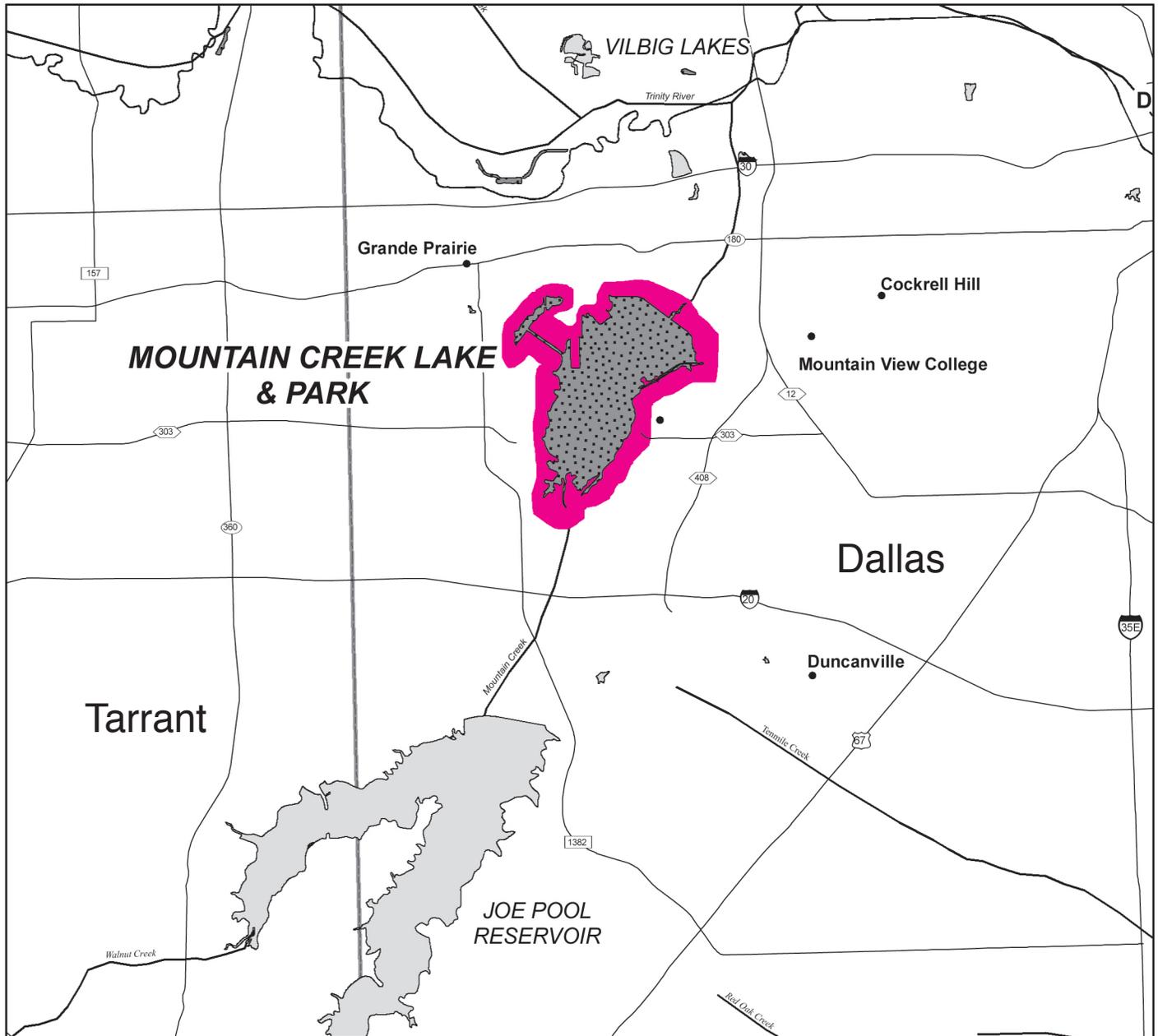
Persons are prohibited from possessing any species of fish or crabs from these waters.



Mountain Creek Lake

Dallas County

AL-12 Issued April 25, 1996



Prohibited Area:
Mountain Creek Lake

Contaminants of Concern:
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Restricted Species:
Persons are prohibited from possessing any species of fish from these waters.

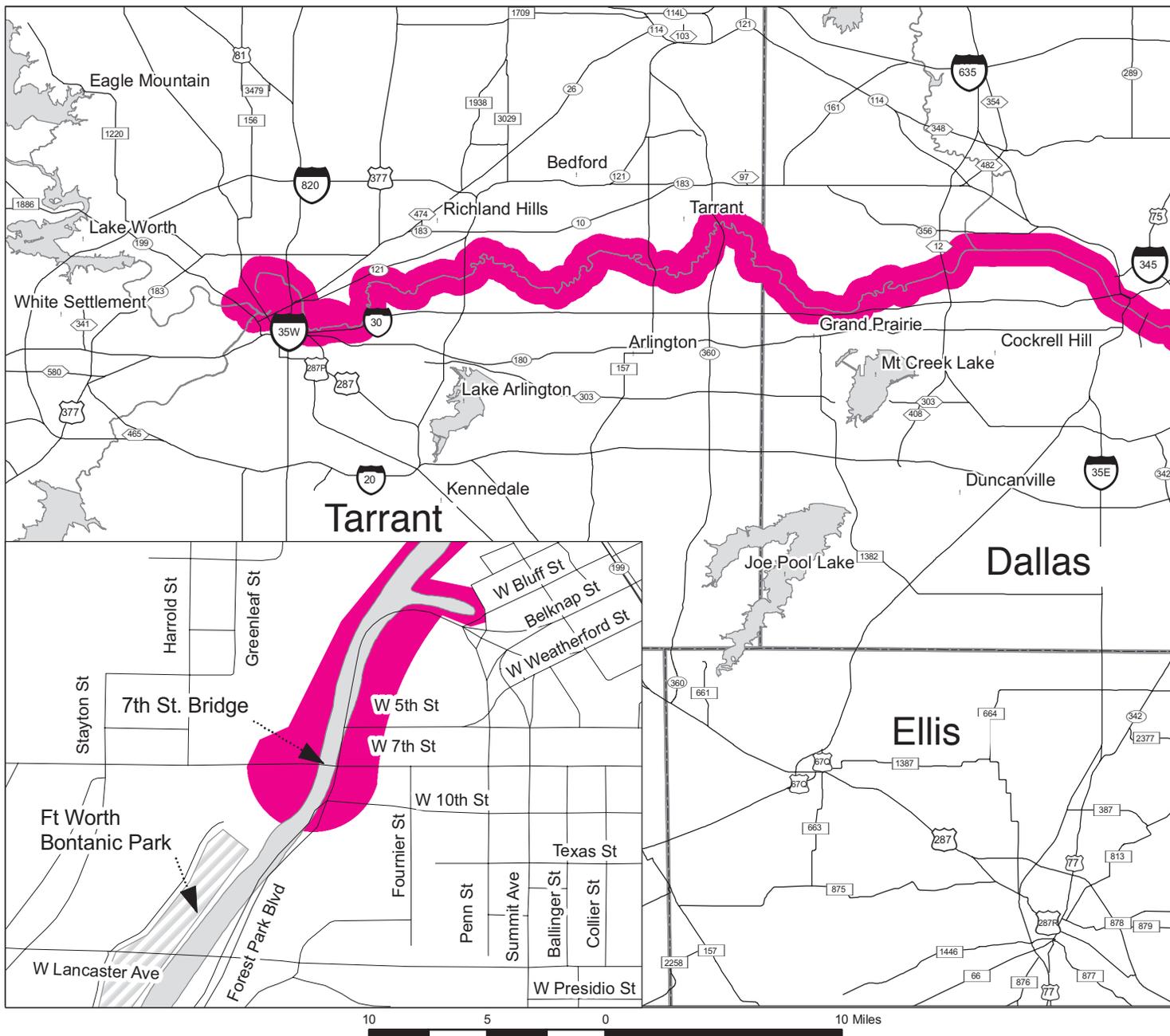


Trinity River

Dallas, Ellis, Kaufman and Tarrant Counties

AL-2 Issued January 4, 1990

AL-14 Issued September 27, 2002



Prohibited Area:

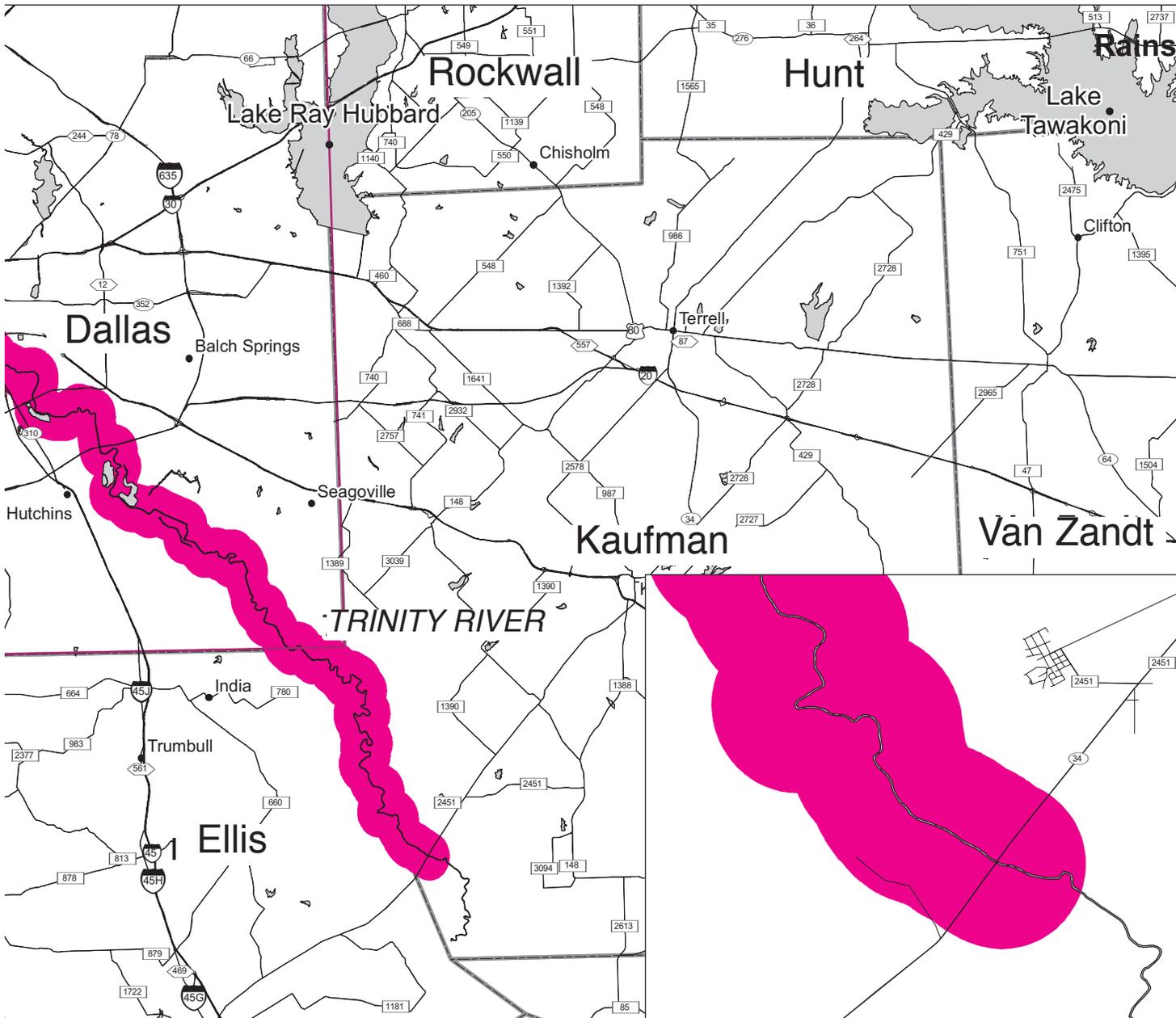
Trinity River from the 7th Street Bridge in Fort Worth downstream to the Texas State Highway 34 Bridge in Kaufman and Ellis Counties southeast of Dallas.

Contaminants of Concern:

Chlordane, DDE, and Polychlorinated biphenyls (PCBs)

Restricted Species:

Persons are prohibited from possessing any species of fish from these waters.





Advisories

Taking or possessing fish or crabs from a water body with a consumption advisory is not illegal. A consumption advisory issued by the DSHS recommends limited consumption of fish or crabs from a water body because tests found contaminants in fish or crab tissue at unsafe levels. Eating more fish or crabs than recommended by a consumption advisory may pose a potential human health risk.

Arroyo Colorado, Llano Grande Lake and the Main Floodway

Cameron and Hidalgo Counties

(not numbered) Issued September 1980

ADV-5 Issued June 24, 1993

ADV-6 Modification Issued November 17, 1993

ADV-19 Modification Issued June 4, 2001

ADV-34 Modification Issued January 31, 2008



Advisory Area:

Arroyo Colorado, Llano Grande Lake, and the Main Floodway upstream of the Port of Harlingen

Contaminants of Concern:

DDE, mercury (Hg), and PCBs

Species Affected:

Longnose gar and smallmouth buffalo

Consumption Advice:

Persons should not consume longnose gar and smallmouth buffalo from these waters.



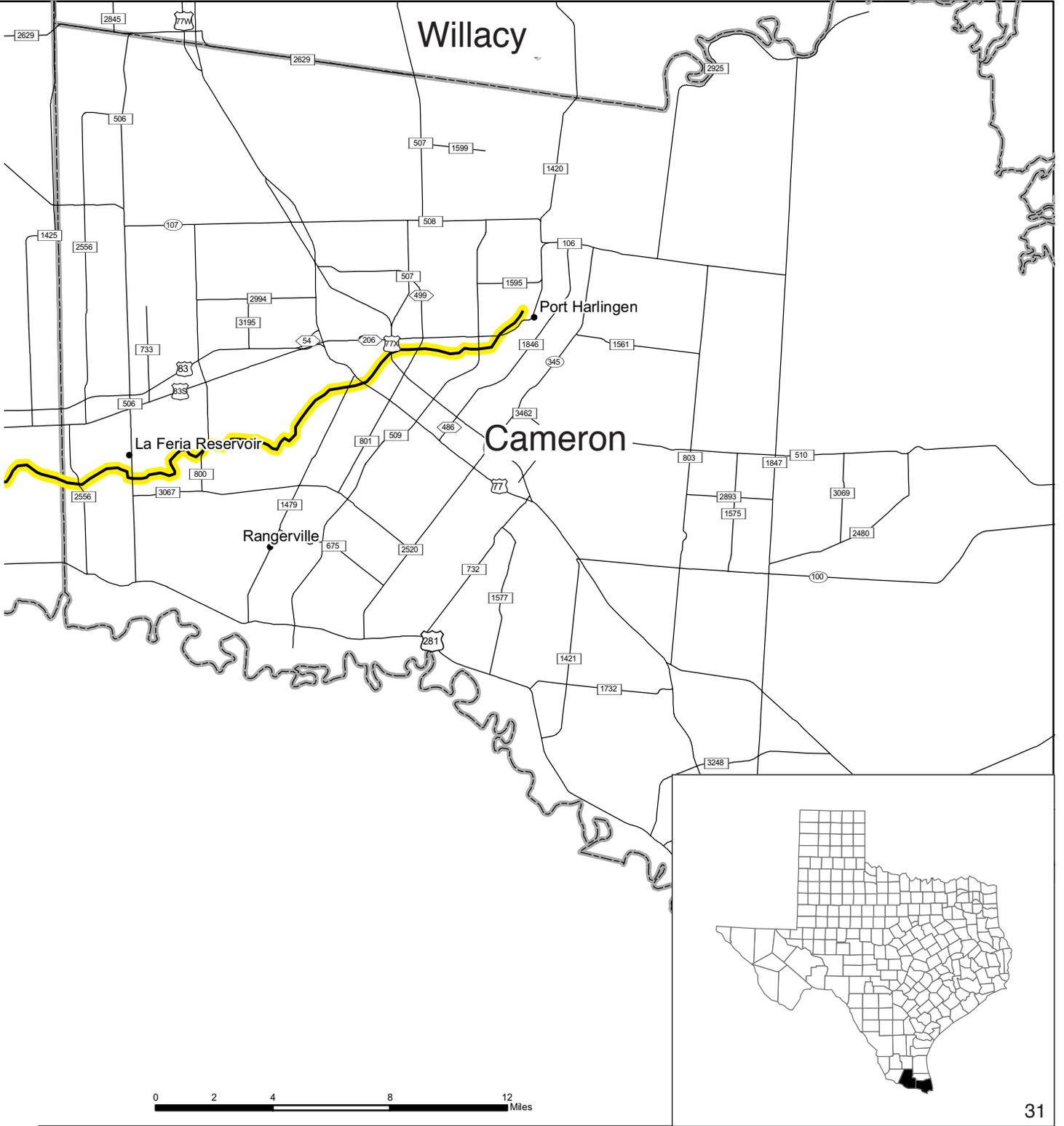
Willacy

Cameron

Port Harlingen

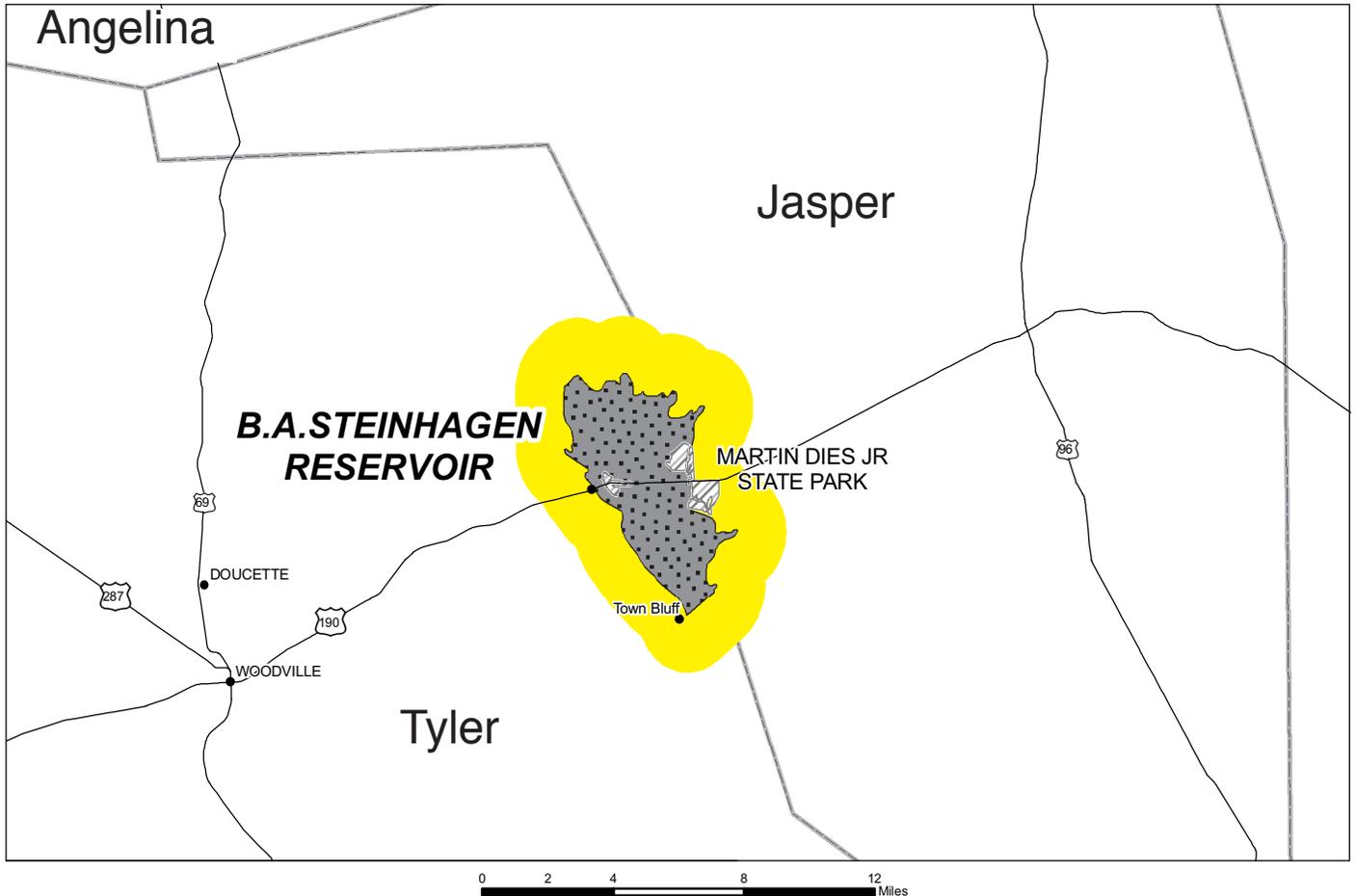
La Feria Reservoir

Rangerville



B.A. Steinhagen Reservoir

Jasper and Tyler Counties
ADV-12 Issued November 2, 1995



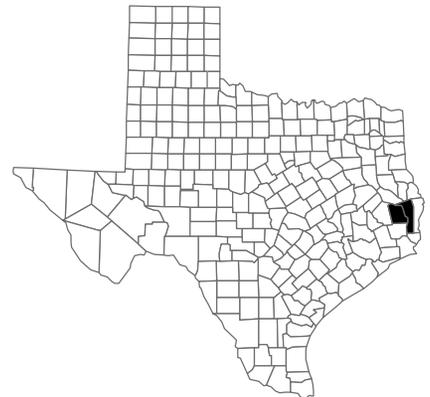
Advisory Area:
B.A. Steinhagen

Contaminant of Concern:
Mercury (Hg)

Species Affected:
Freshwater drum, hybrid striped bass, largemouth bass, and white bass

Consumption Advice:

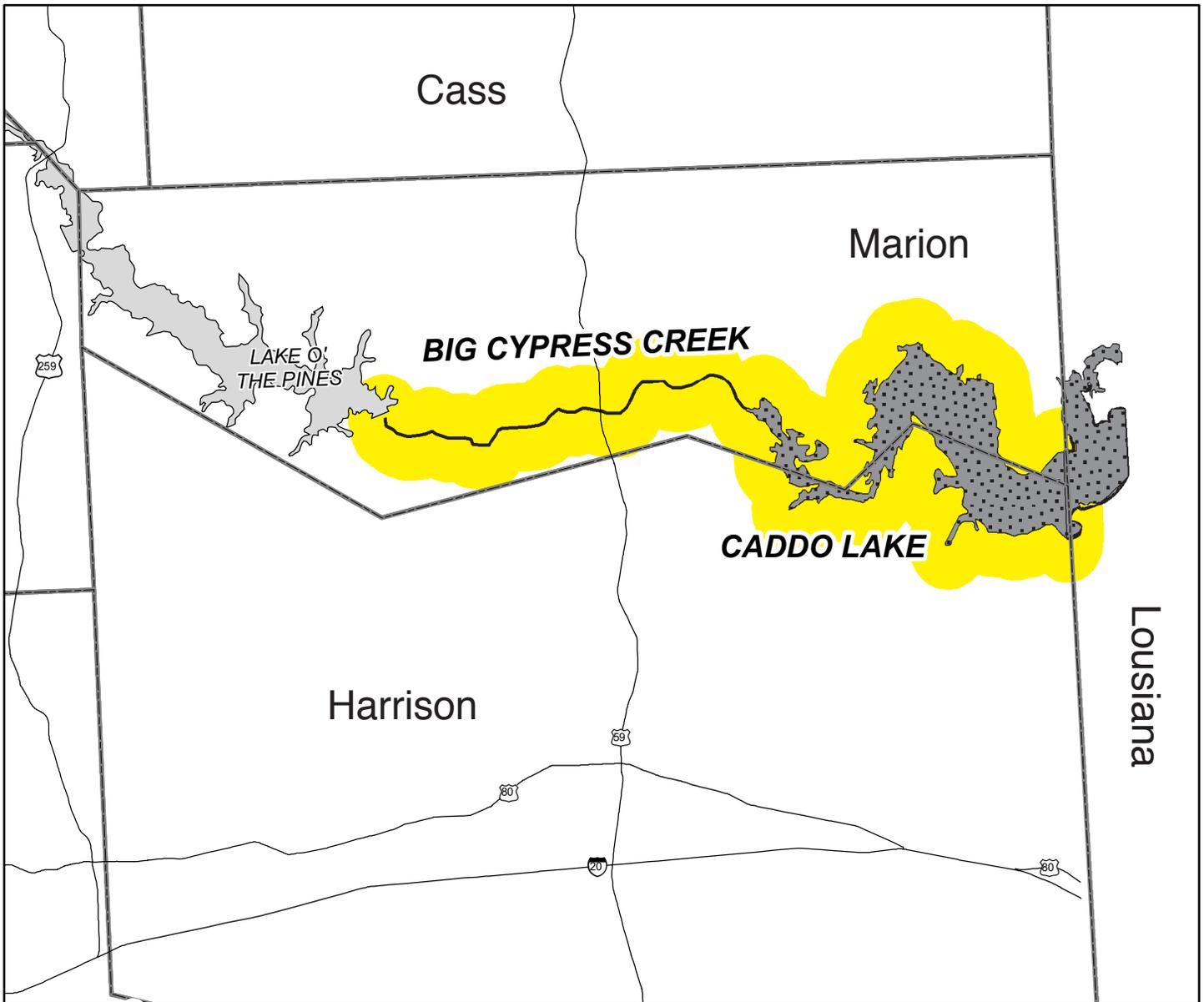
1. Adults should limit consumption of freshwater drum and largemouth bass to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of freshwater drum and largemouth bass to no more than two (2) four ounce (4 oz) meals per month.
3. Of the meals recommended above, adults should limit consumption of hybrid striped bass or white bass to no more than one (1) eight ounce (8 oz) meal per month.
4. Of the meals recommended above, children under twelve (12) years old should limit consumption of hybrid striped bass or white bass to no more than one (1) four ounce (4 oz) meal per month.



Big Cypress Creek and Caddo Lake

Harrison and Marion Counties

ADV-12 Issued November 2, 1995



Advisory Area:

Big Cypress Creek (downstream of Lake O' The Pines) and all Texas waters of Caddo Lake

Contaminant of Concern:

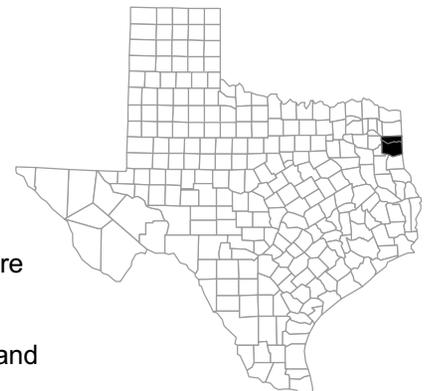
Mercury (Hg)

Species Affected:

Freshwater drum and largemouth bass

Consumption Advice:

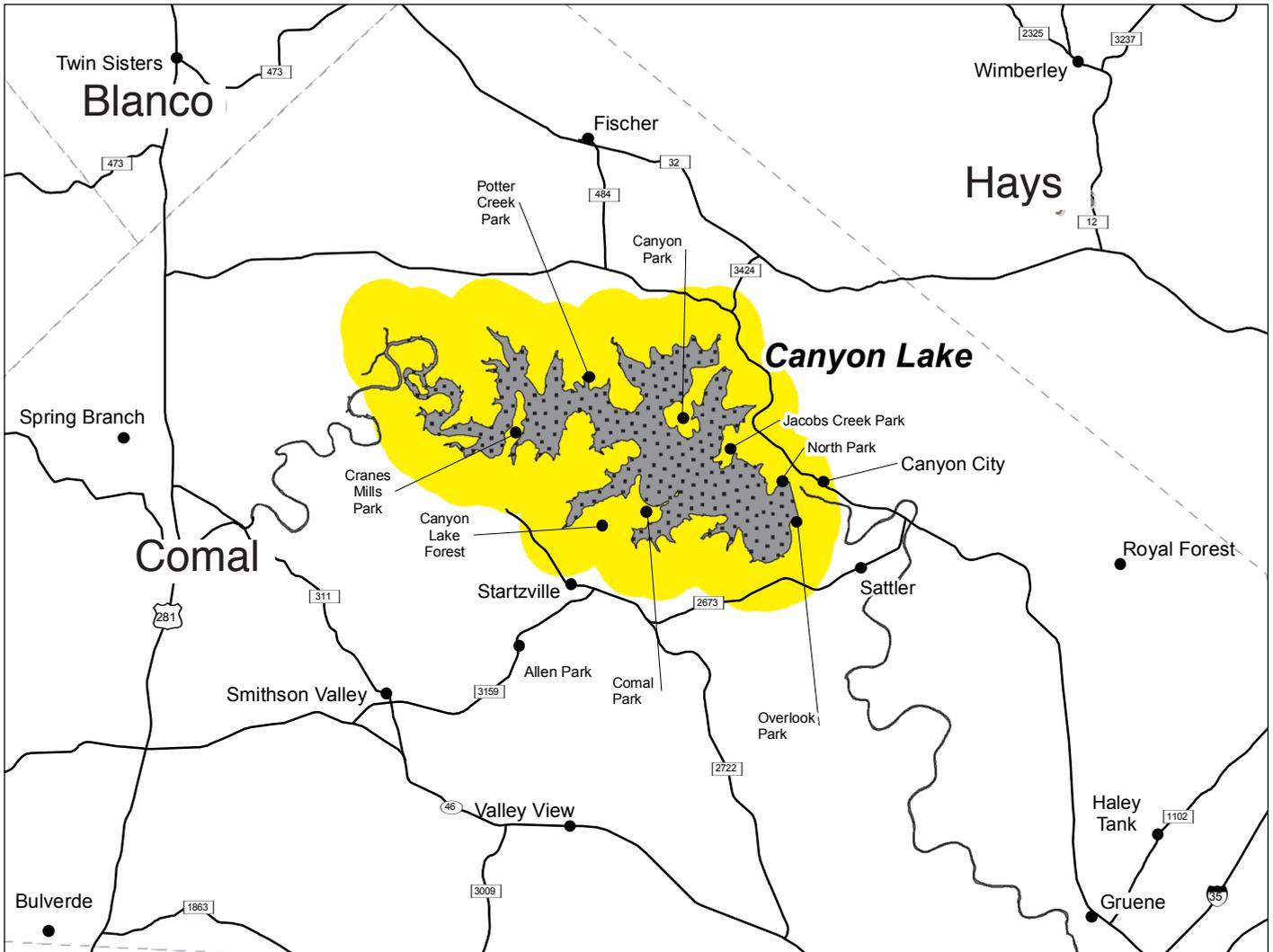
1. Adults should limit consumption of freshwater drum and largemouth bass to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of freshwater drum and largemouth bass to no more than two (2) four ounce (4 oz) meals per month.



Canyon Lake

Comal County

ADV-30 Issued October 26, 2006



Advisory Area:

Canyon Lake

Contaminant of Concern:

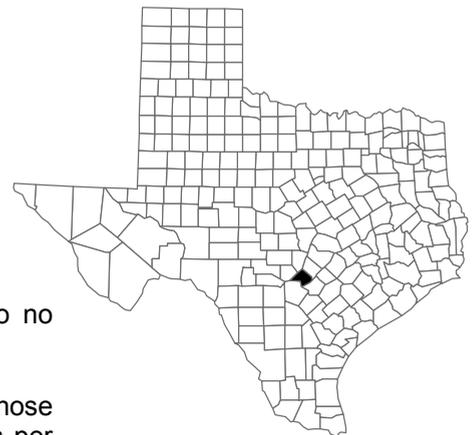
Mercury (Hg)

Species Affected:

Longnose gar and striped bass

Consumption Advice:

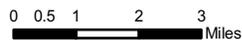
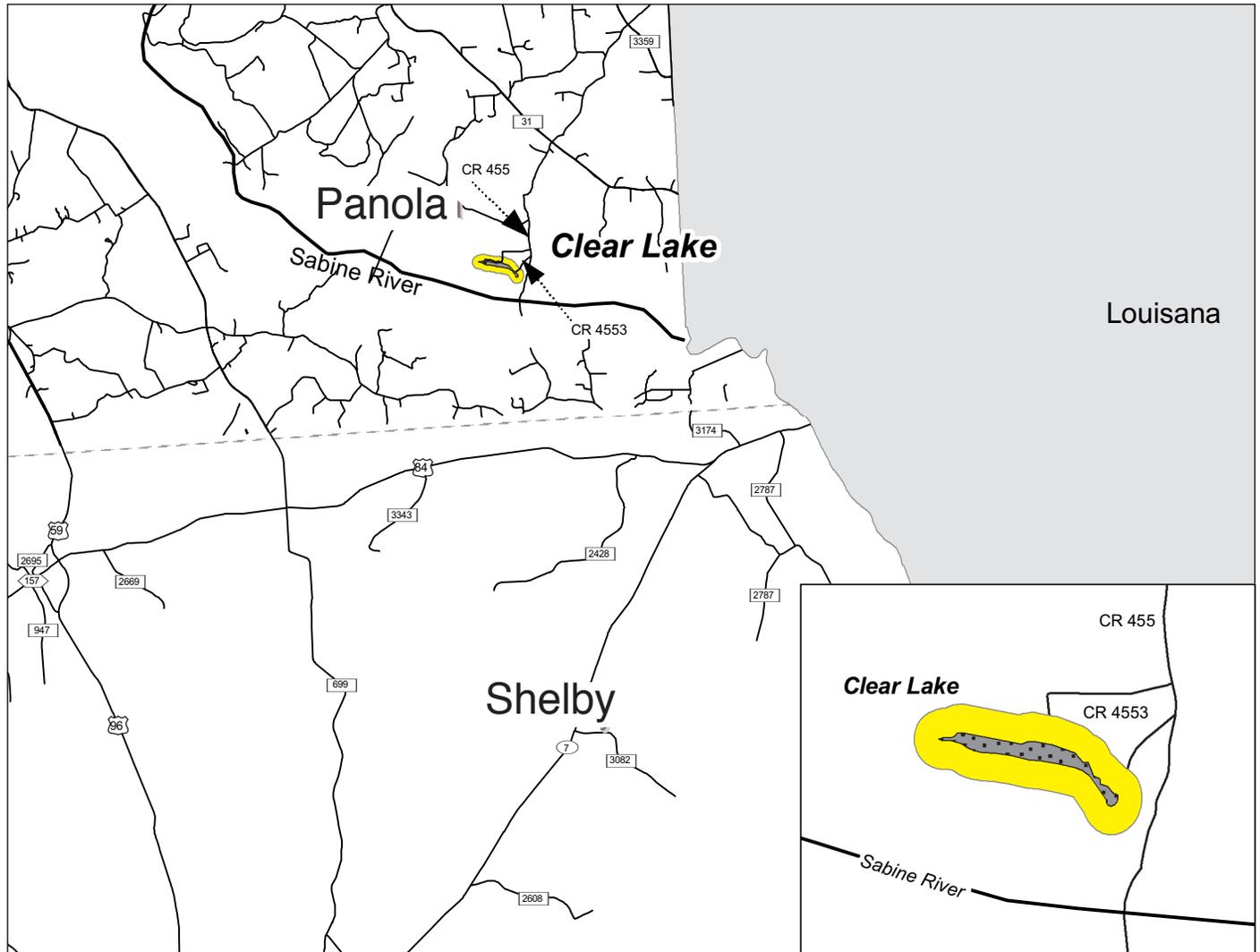
1. Adults should limit consumption of longnose gar and striped bass to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of longnose gar and striped bass to no more than two (2) four ounce (4 oz) meals per month.
3. Women who are of childbearing age, who are or who might become pregnant, or who are nursing, should not consume longnose gar or striped bass from Canyon Lake.



Clear Lake

Panola County

ADV-31 Issued March 27, 2007



Advisory Area:

Clear Lake

Contaminant of Concern:

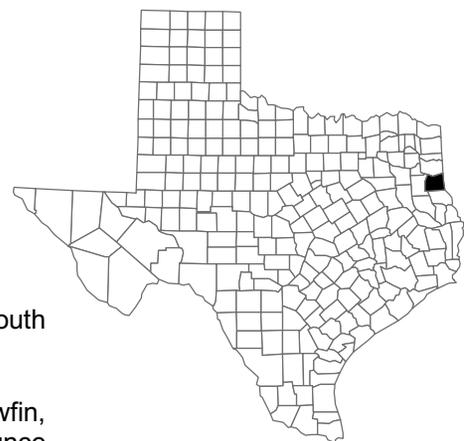
Mercury (Hg)

Species Affected:

Bowfin, freshwater drum and largemouth bass

Consumption Advice:

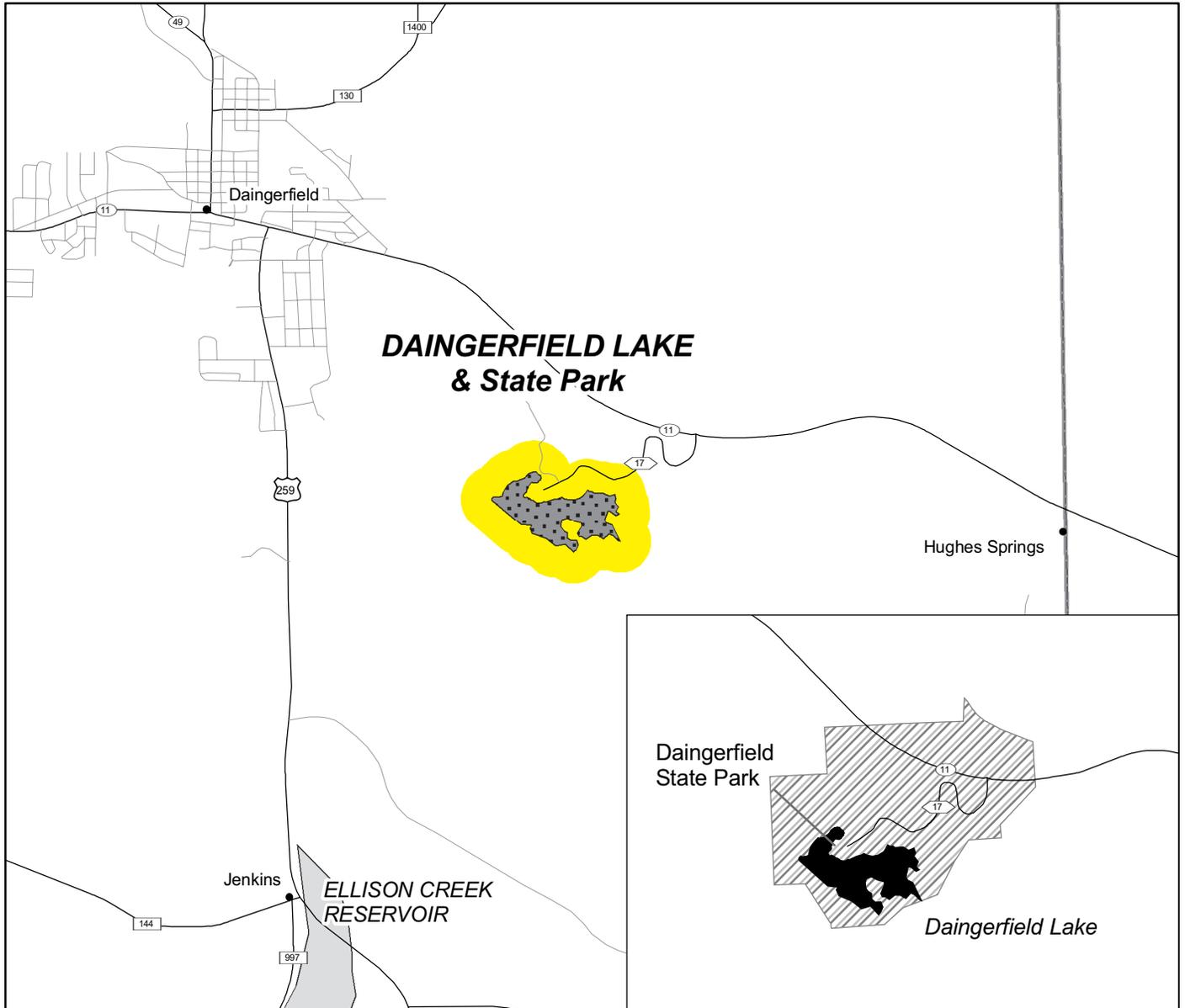
1. Adults should limit consumption of bowfin, freshwater drum, and largemouth bass to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of bowfin, freshwater drum, and largemouth bass to no more than two (2) four ounce (4 oz) meals per month.
3. Women who are of childbearing age, who are or who might become pregnant, or who are nursing, should not consume bowfin, freshwater drum, and largemouth bass from Clear Lake.



Lake Daingerfield

Morris County

ADV-22 Issued March 13, 2002



Advisory Area:

Lake Daingerfield



Contaminant of Concern:

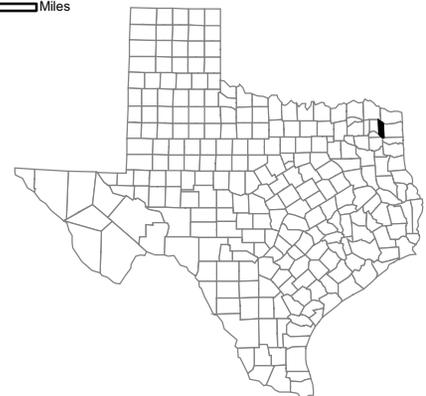
Mercury (Hg)

Species Affected:

Largemouth bass

Consumption Advice:

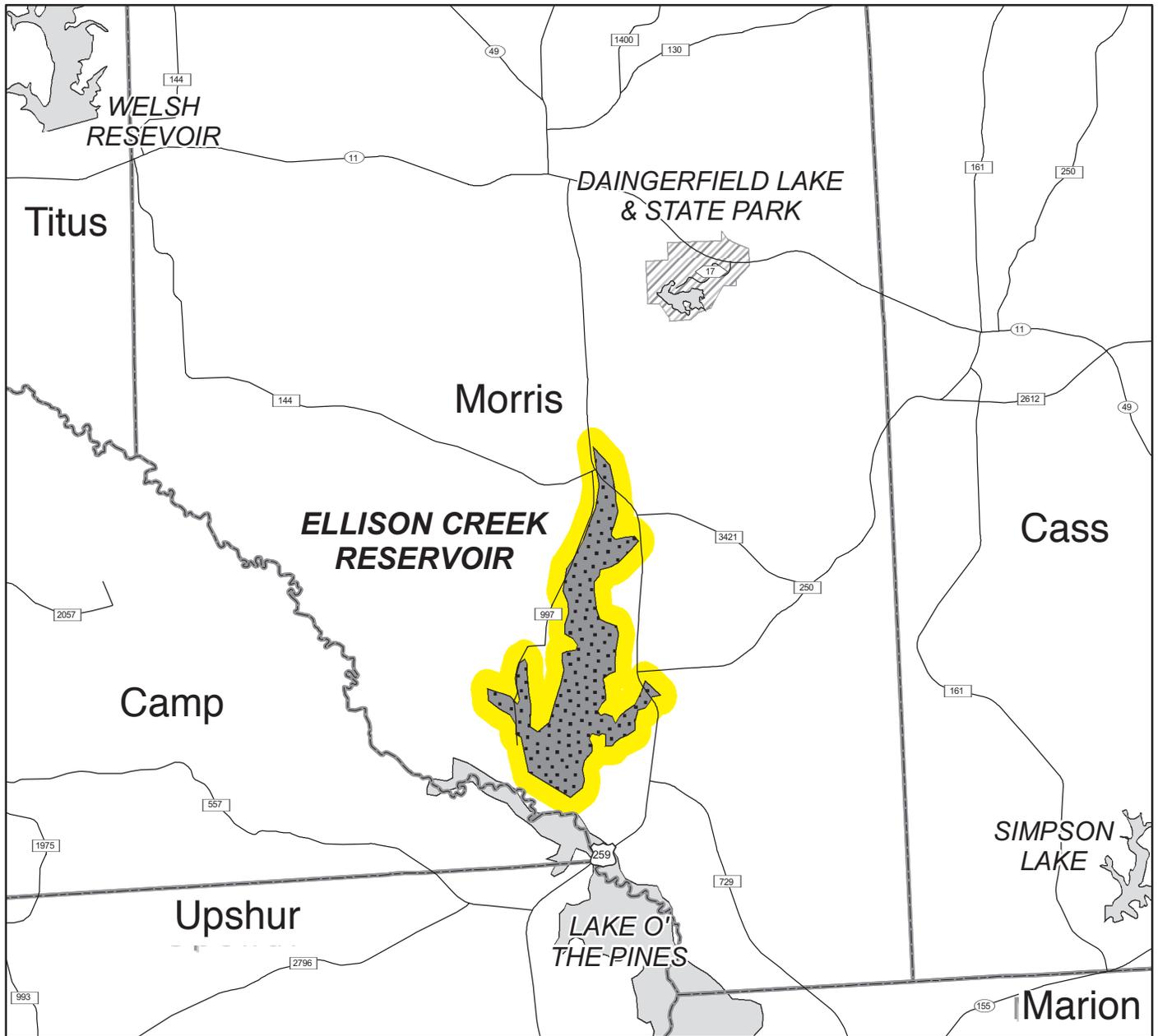
1. Adults should limit consumption of largemouth bass to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of largemouth bass to no more than two (2) four ounce (4 oz) meals per month.



Ellison Creek Reservoir "Lone Star Lake"

Morris County

ADV-29 Issued December 28, 2005



Advisory Area:

Ellison Creek Reservoir

Chemicals of Concern:

Polychlorinated Biphenyls (PCBs)

Species Affected:

All fish species

Consumption Advice:

Persons should not consume any species of fish from this reservoir.



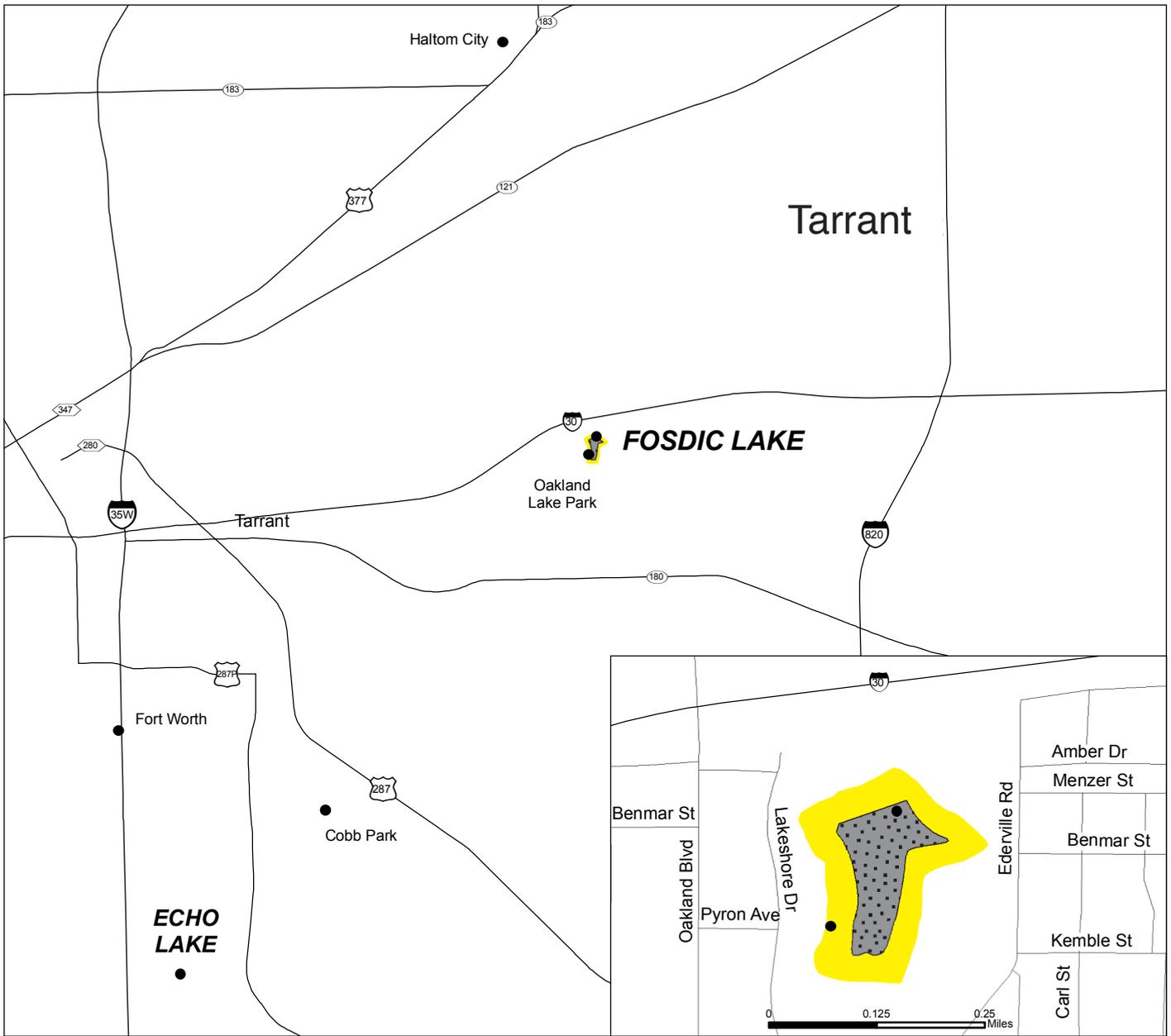
Fosdic Lake

Tarrant County

AL-10 Issued April 5, 1995

AL-16 Rescinded December 20, 2007

ADV-33 Issued December 20, 2007



Advisory Area:

Fosdic Lake

Contaminant of Concern:

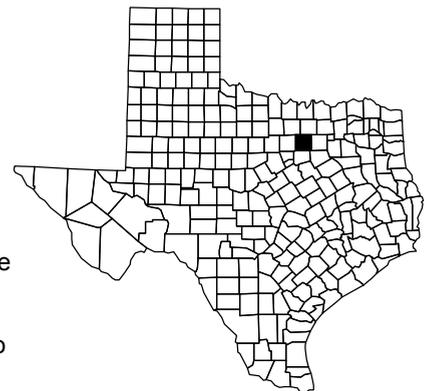
Polychlorinated Biphenyls (PCBs)

Species Affected:

Common carp

Consumption Advice:

1. Adults should limit consumption of common carp to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of common carp to no more than two (2) four ounce (4 oz) meals per month.
3. Women who are of childbearing age, who are or who might become pregnant, or who are nursing, should not consume common carp from Fosdic Lake.

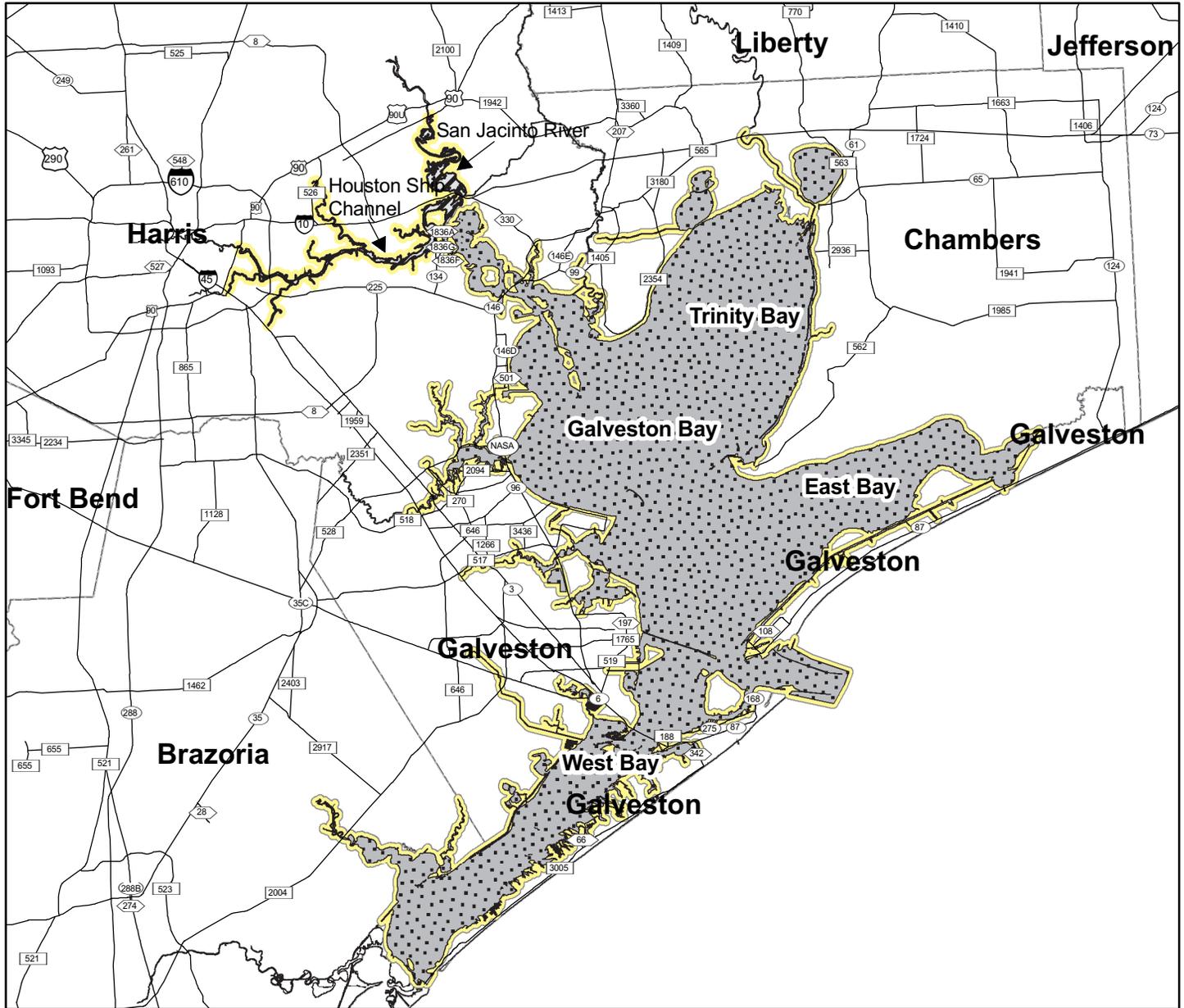


Houston Ship Channel and Galveston Bay

Brazoria, Chambers, Galveston, and Harris Counties

ADV-20 Issued October 9, 2001

ADV-35 Issued July 8, 2008



Advisory Areas:

 **Houston Ship Channel**
The Houston Ship Channel upstream of the Lynchburg Ferry crossing and all contiguous waters, including the San Jacinto River below the U.S. Highway 90 bridge.

 **Galveston Bay**
Galveston Bay including Chocolate Bay, East Bay, Trinity Bay, and West Bay and contiguous waters

Contaminants of Concern:

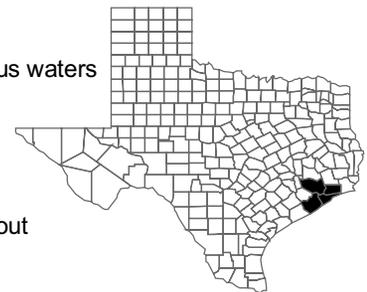
 Dioxin, organochlorine pesticides, and PCBs

 Dioxin and PCBs

Species Affected:

 All species of fish

 All catfish species and spotted seatrout



Consumption Advice:

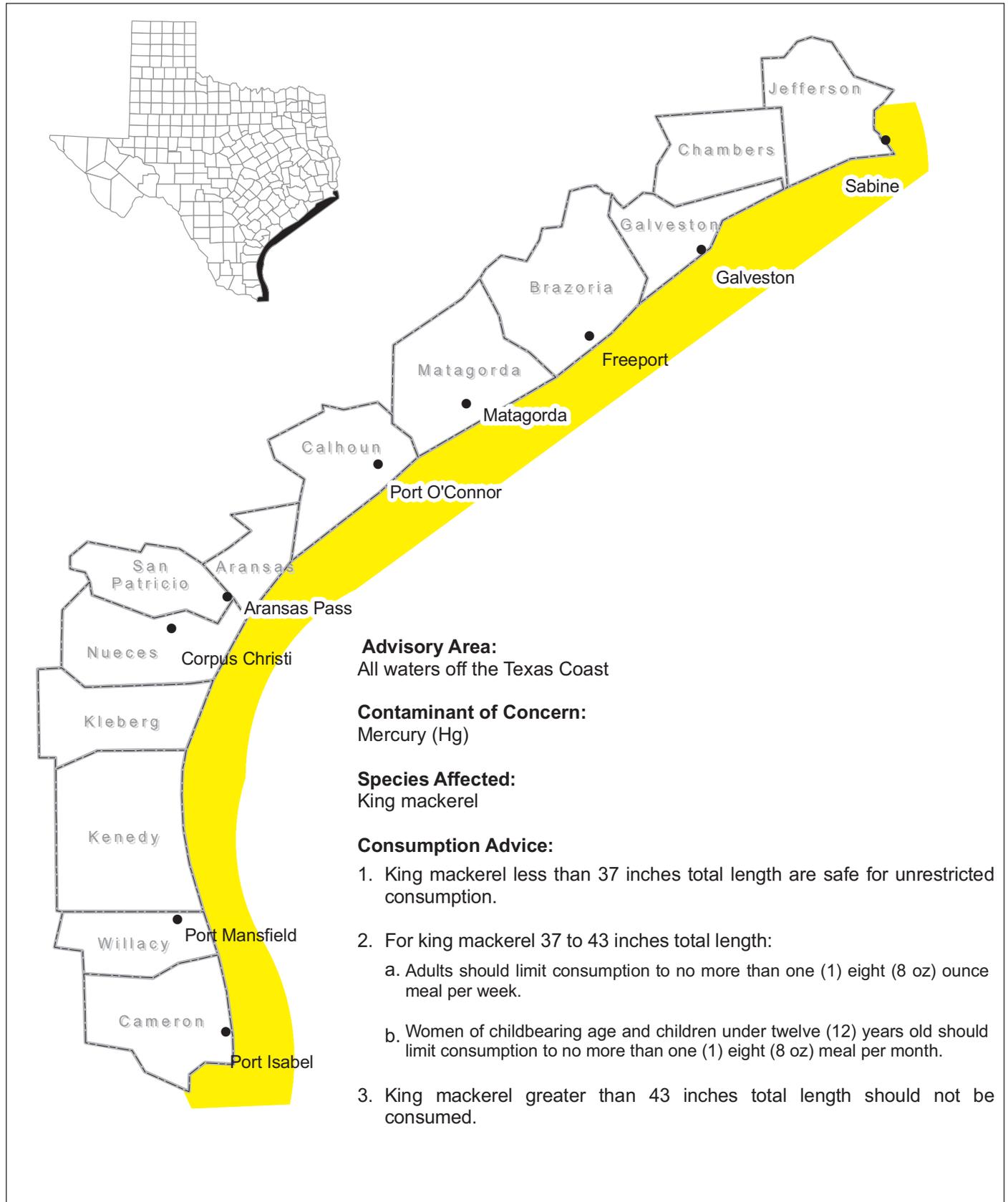
 Persons should limit consumption of all species of fish from this area to no more than one eight-ounce meal per month. Women who are nursing, pregnant, or who may become pregnant and children under 12 should not consume catfish or spotted seatrout.

 Persons should limit consumption of catfish and spotted seatrout from this area to no more than one eight-ounce meal per month. Women who are nursing, pregnant, or who may become pregnant and children under 12 should not consume catfish or spotted seatrout.

The Gulf of Mexico

Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kenedy, Kleberg, Matagorda, Nueces, Refugio, San Patricio and Willacy Counties

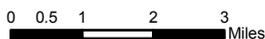
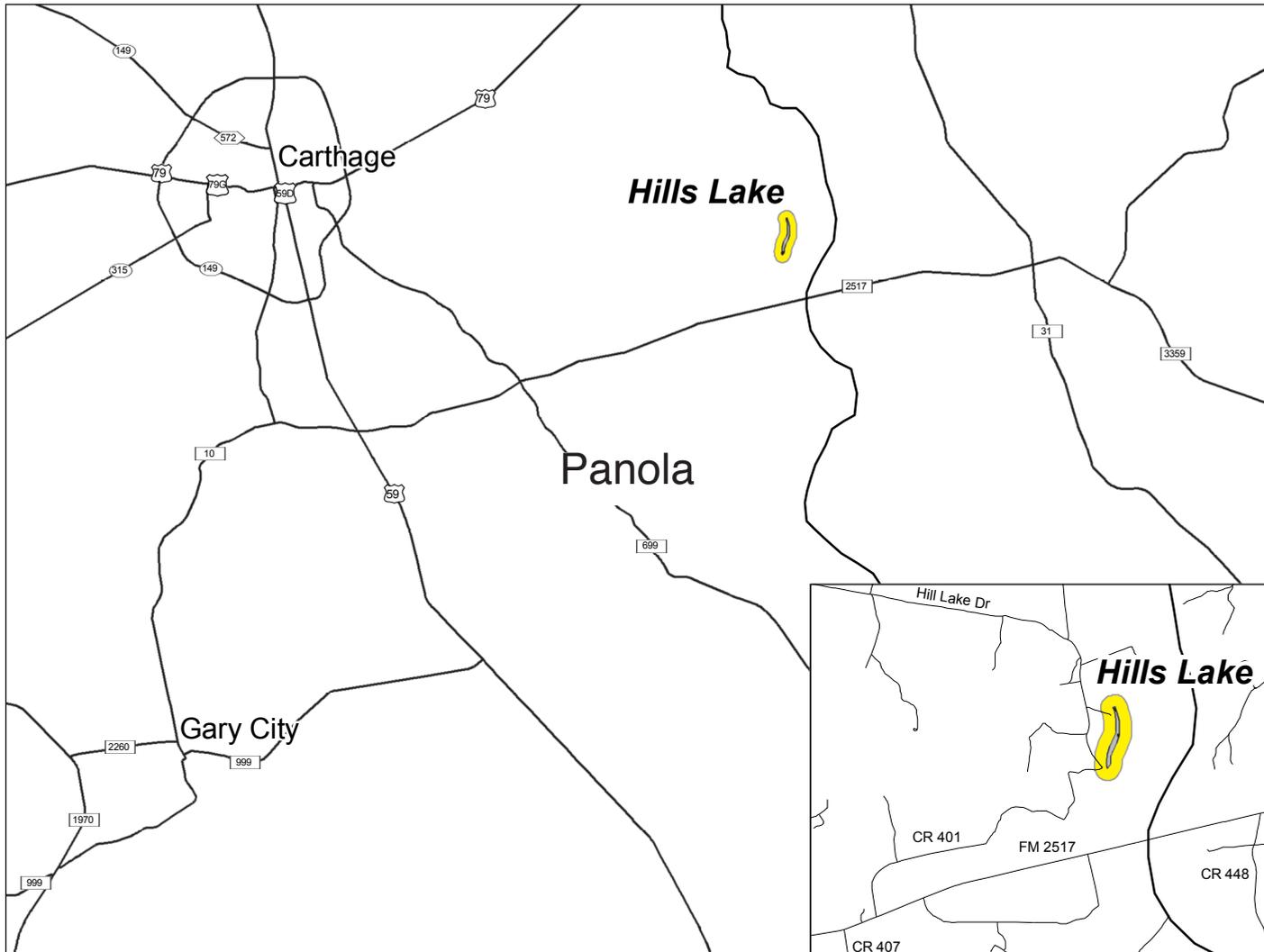
ADV-14 Issued June 10, 1997



Hills Lake

Panola County

ADV-32 Issued March 27, 2007



Advisory Area:

Hills Lake

Contaminant of Concern:

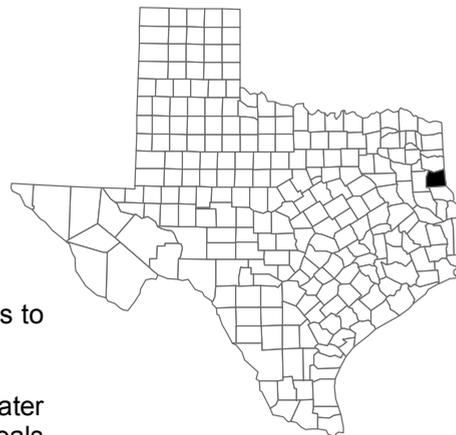
Mercury (Hg)

Species Affected:

Freshwater drum and largemouth bass

Consumption Advice:

1. Adults should limit consumption of freshwater drum and largemouth bass to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of freshwater drum and largemouth bass to no more than two (2) four ounce (4 oz) meals per month.
3. Women who are of childbearing age, who are or who might become pregnant, or who are nursing, should not consume freshwater drum and largemouth bass from Hills Lake.



Houston Ship Channel and Upper Galveston Bay

Chambers and Harris Counties
ADV-3 Issued September 19, 1990



Houston Ship Channel and Upper Galveston Bay

Advisory Area:

The Houston Ship Channel and all contiguous waters including the San Jacinto River below the U.S. Highway 90 bridge and Upper Galveston Bay north of a line drawn from Red Bluff Point to Five Mille Cut Marker to Houston Point.

Contaminant of Concern:

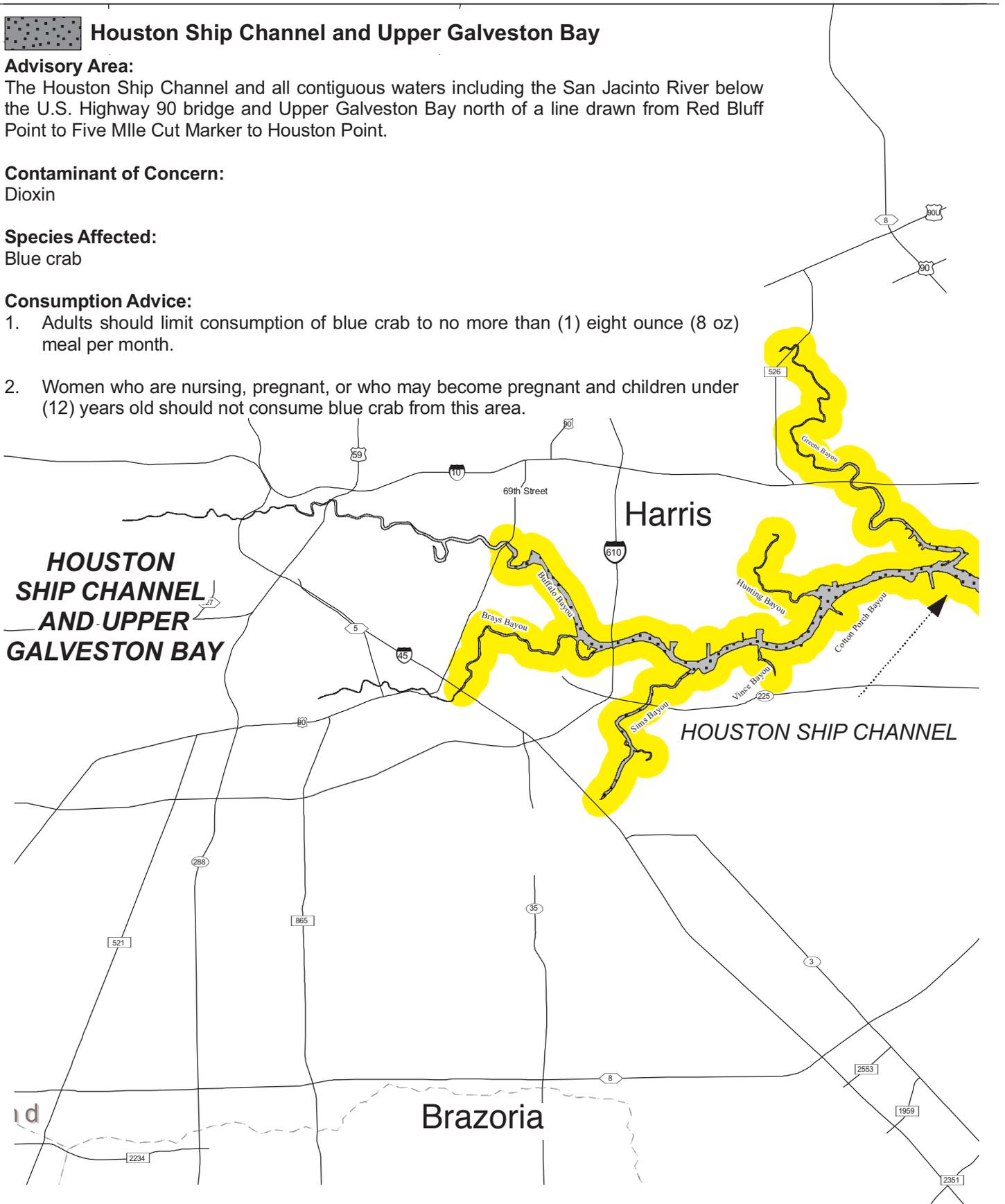
Dioxin

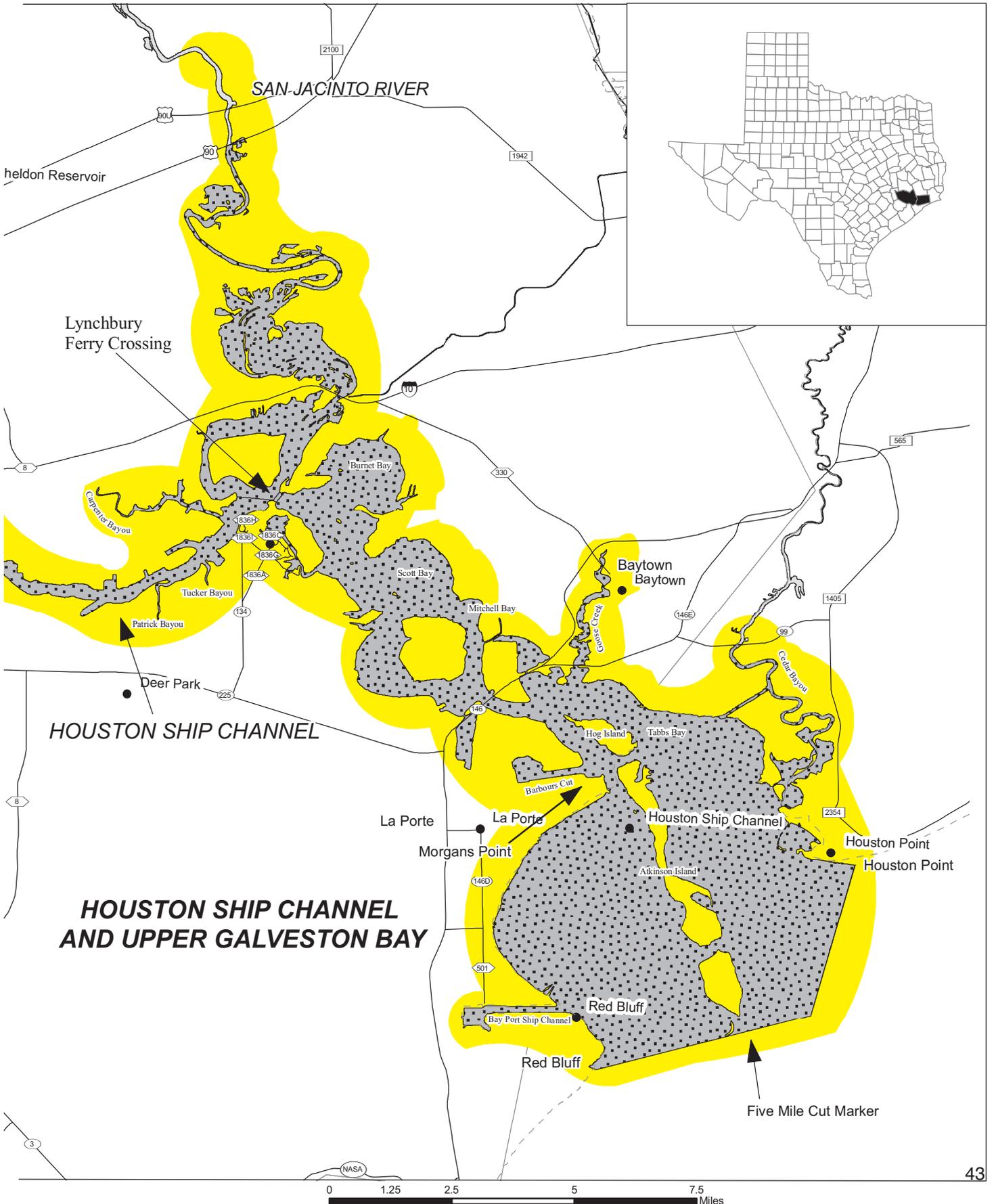
Species Affected:

Blue crab

Consumption Advice:

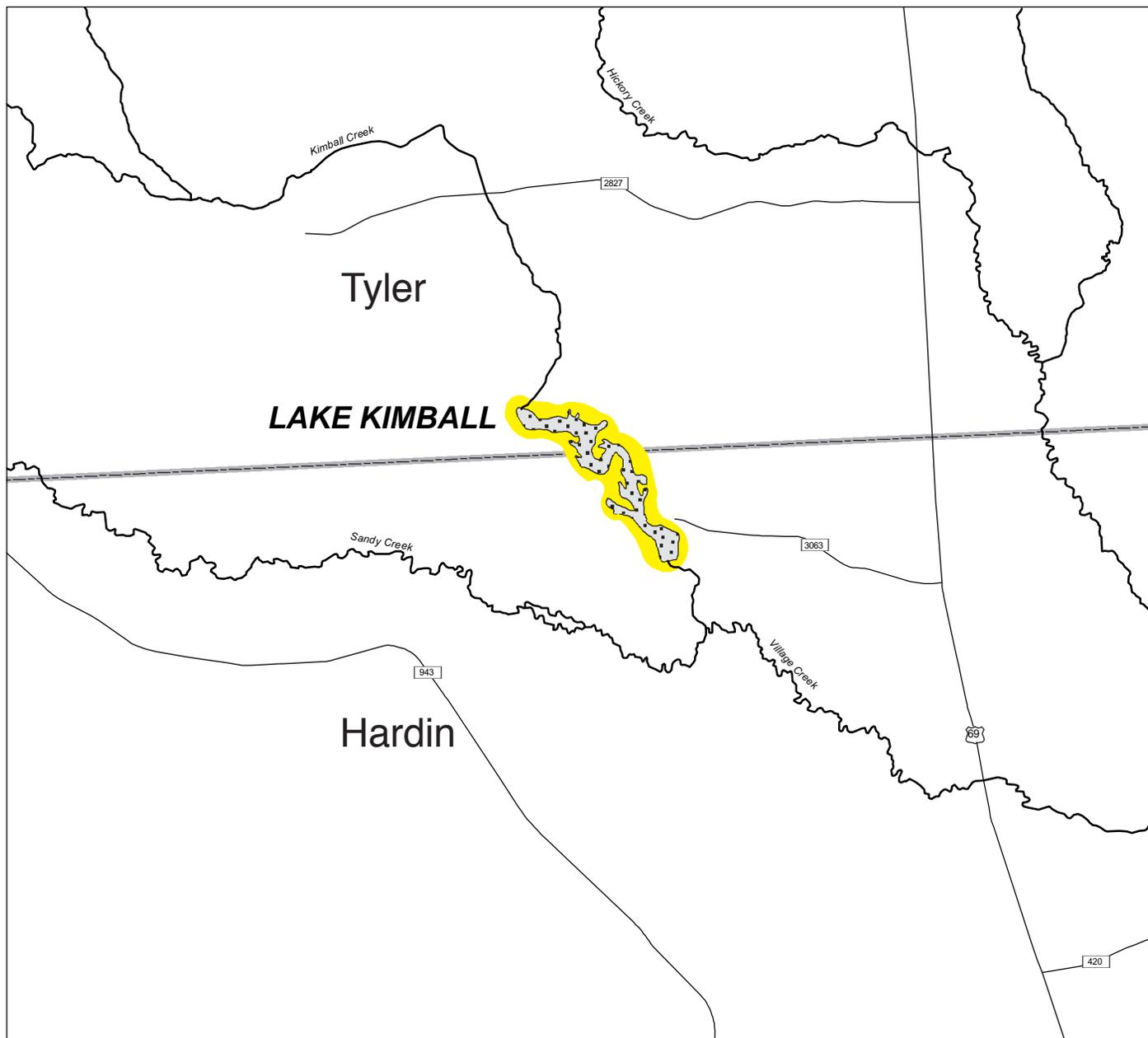
1. Adults should limit consumption of blue crab to no more than (1) eight ounce (8 oz) meal per month.
2. Women who are nursing, pregnant, or who may become pregnant and children under (12) years old should not consume blue crab from this area.





Lake Kimball

Hardin and Tyler Counties
ADV-16 Issued April 23, 1999



Advisory Area:
Lake Kimball



Contaminant of Concern:
Mercury (Hg)

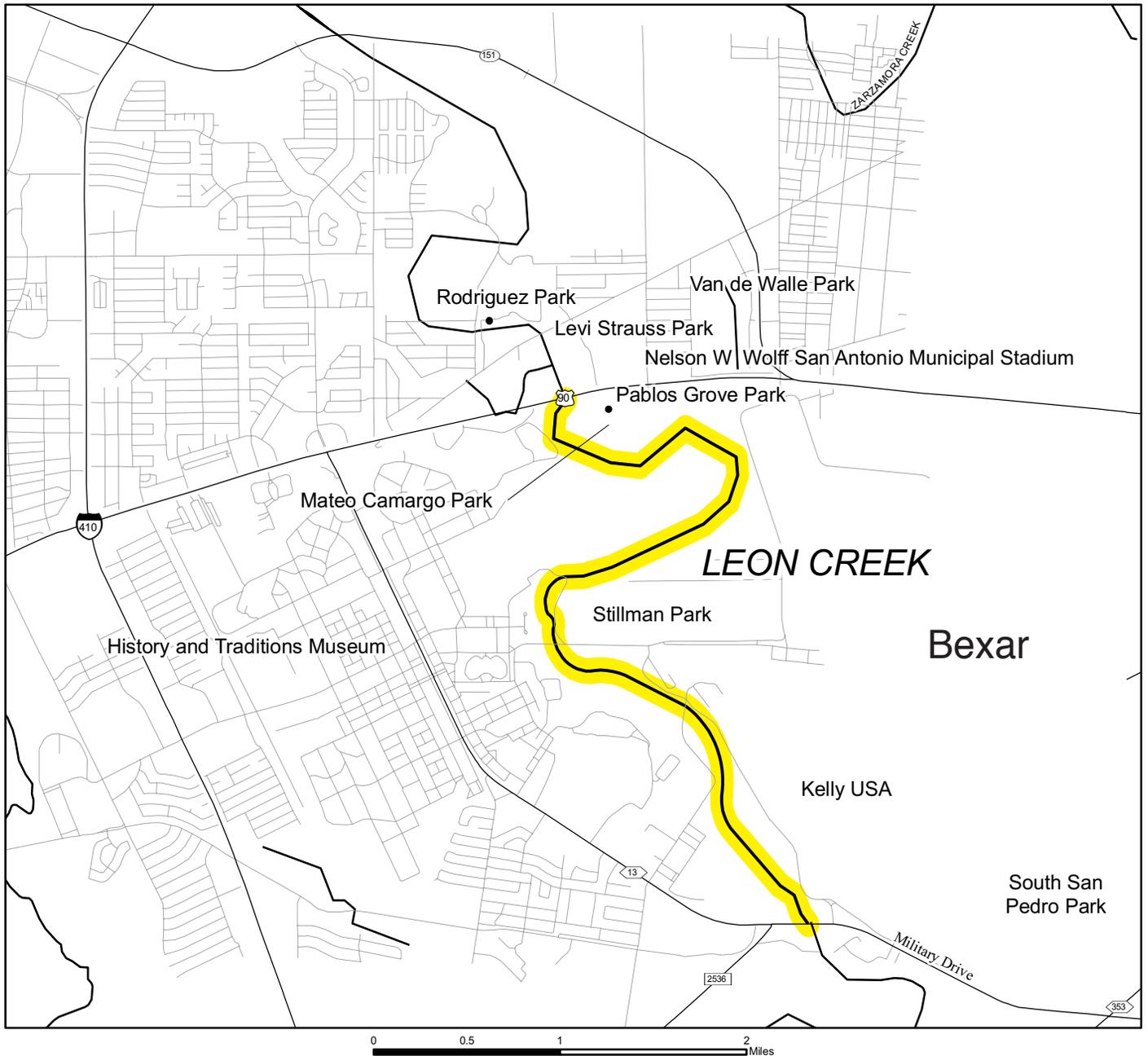
Species Affected:
All species of fish

Consumption Advice:

1. Adults should limit consumption of fish to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption to no more than two (2) four ounce (4 oz) meals per month.



Leon Creek
Bexar County
ADV-26 Issued August 27, 2002

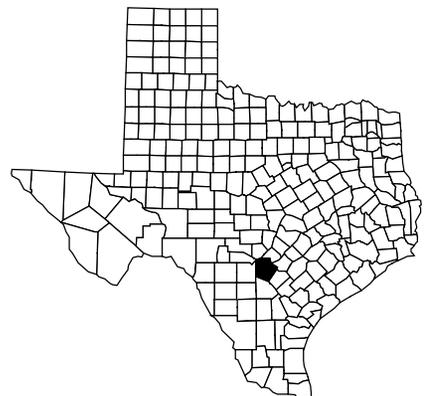


Advisory Area:
Leon Creek from Texas State Highway 90 bridge downstream to Military Drive

Contaminants of Concern:
Polychlorinated biphenyls (PCBs)

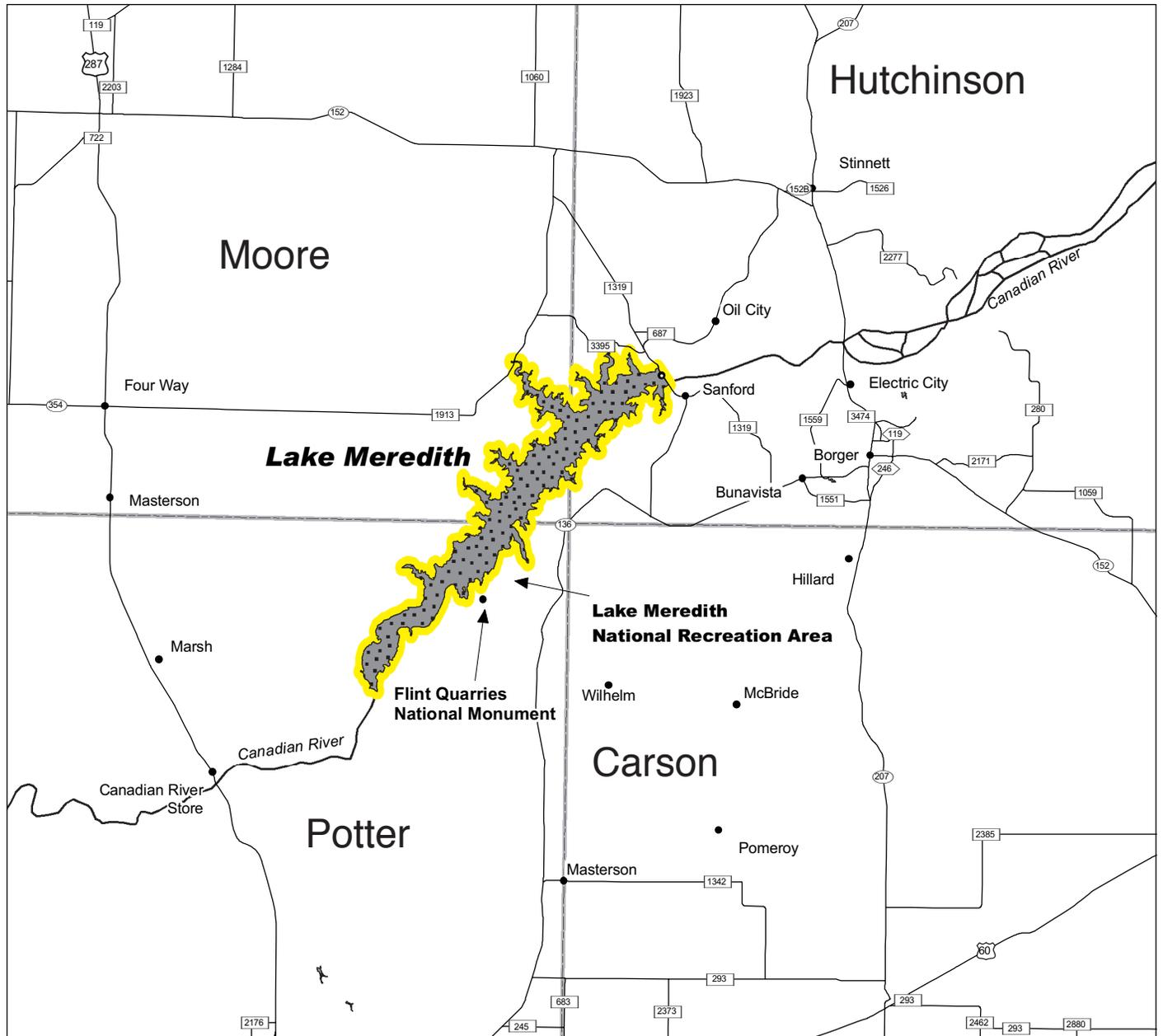
Species Affected:
All species of fish

Consumption Advice:
Persons should not consume any species of fish from these waters.



Lake Meredith

Hutchinson, Moore, and Potter Counties
ADV-24 Issued August 15, 2002



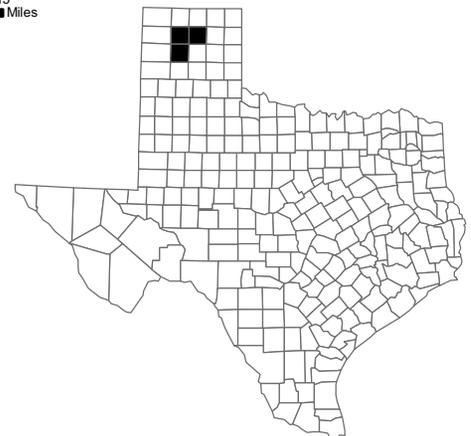
Advisory Area:
Lake Meredith

Contaminant of Concern:
Mercury (Hg)

Species Affected:
Walleye

Consumption Advice:

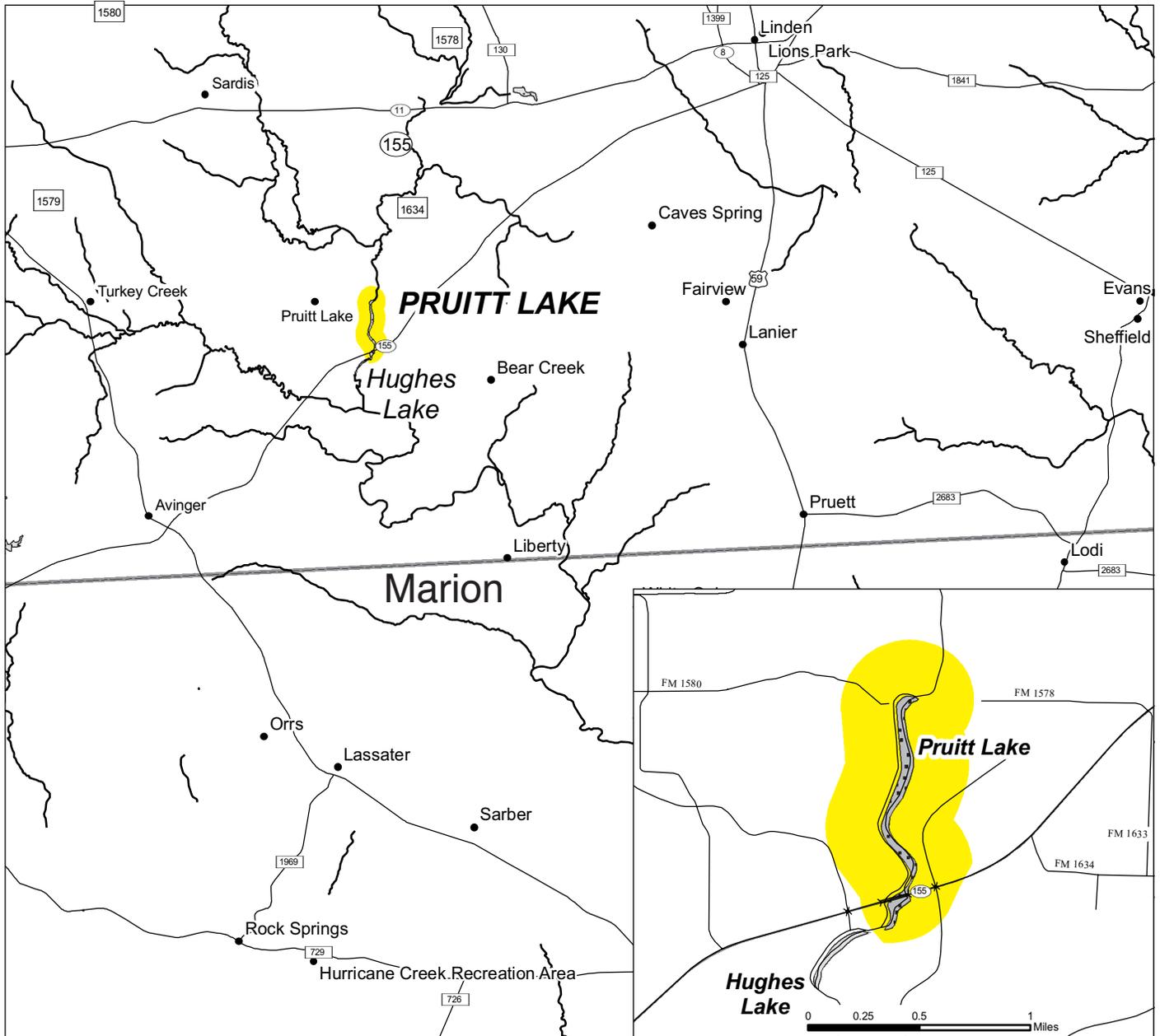
1. Adults should limit consumption of walleye to no more than two (2) eight-ounce (8 oz) meals per month.
2. Children should limit consumption of walleye to no more than two (2) four-ounce (4 oz) meals per month.



Pruitt Lake (Black Cypress Creek)

Cass County

ADV-16 Issued April 23, 1999



Advisory Area:

Pruitt Lake

Contaminant of Concern:

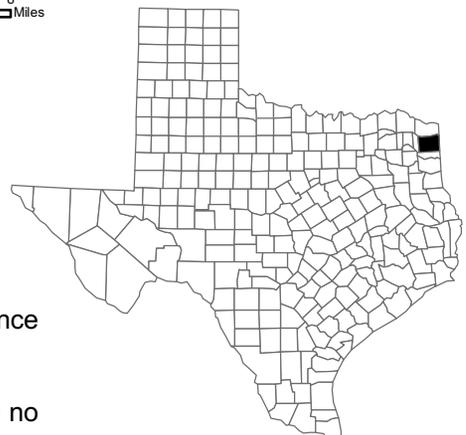
Mercury (Hg)

Species Affected:

All species of fish

Consumption Advice:

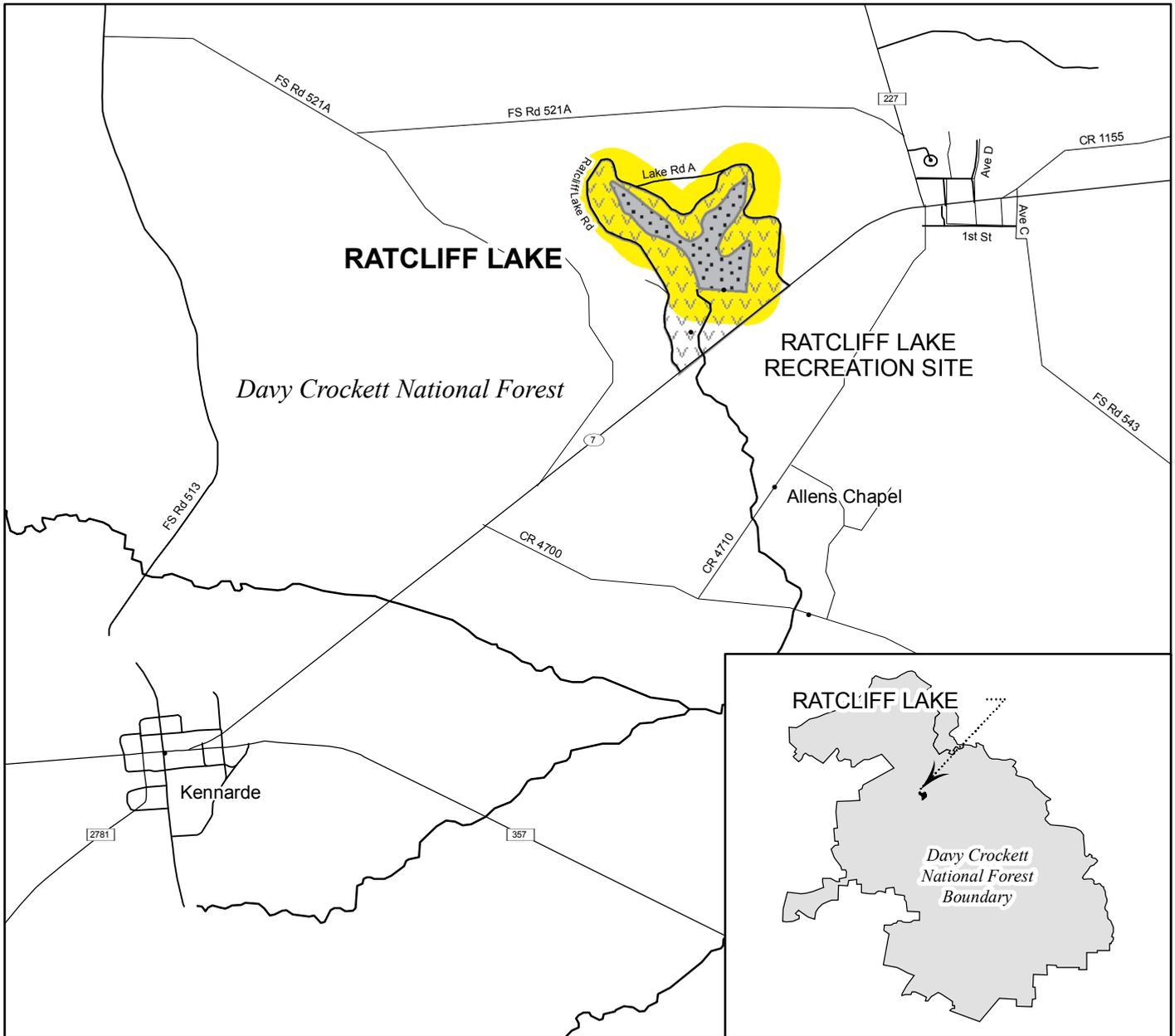
1. Adults should limit consumption of fish to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of fish to no more than two (2) four ounce (4 oz) per month.



Ratcliff Lake

Houston County

ADV-23 Issued May 10, 2002



Advisory Area:

Ratcliff Lake



Contaminant of Concern:

Mercury (Hg)

Species Affected:

Largemouth bass

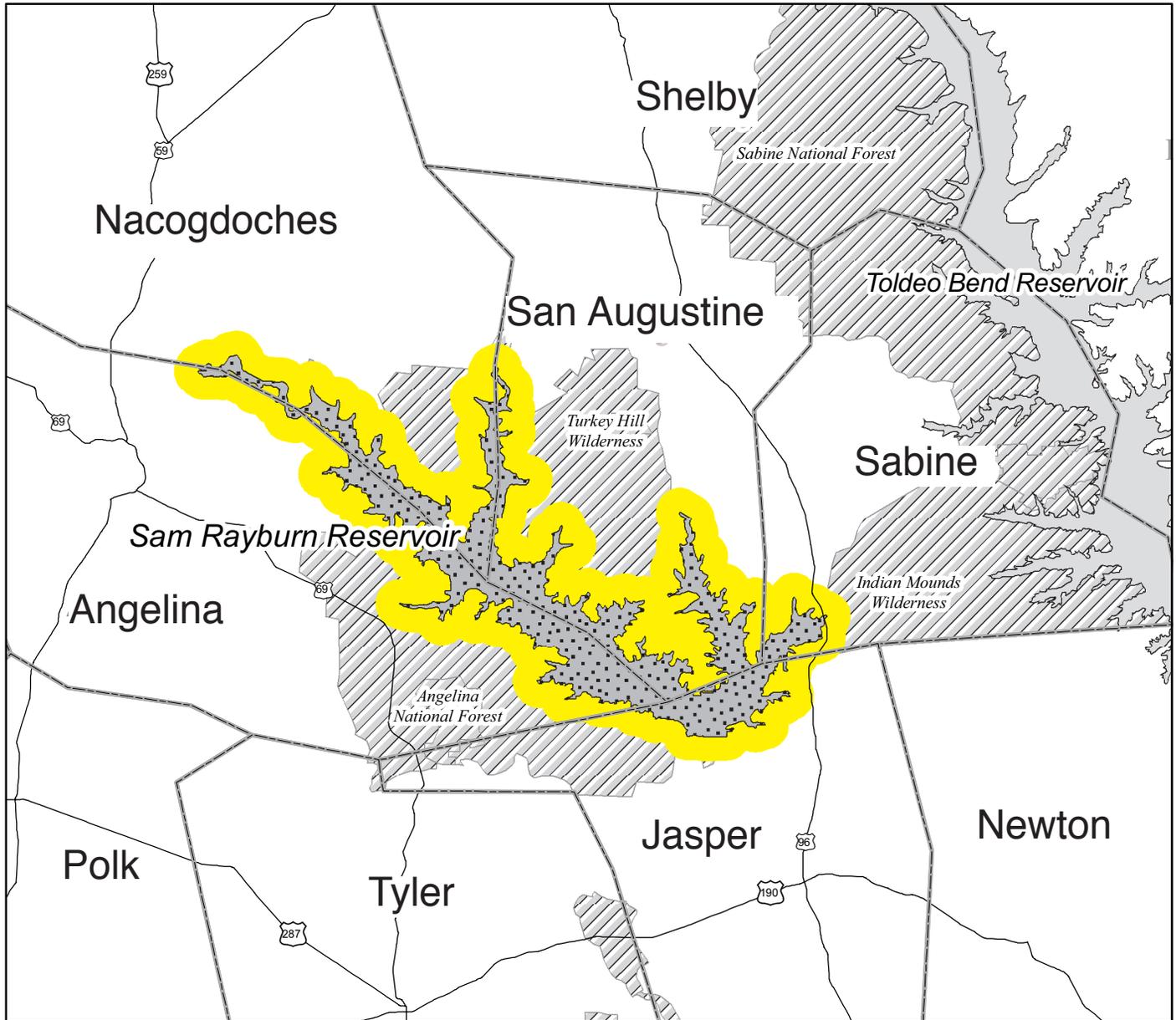
Consumption Advice:

1. Adults should limit consumption of largemouth bass to no more than two (2) eight ounce (8 oz) meals per month
2. Children under twelve (12) years old should limit consumption of largemouth bass to no more than two (2) four ounce (4 oz) meals per month.



Sam Rayburn Reservoir

Angelina, Jasper, Nacogdoches, Sabine, and San Augustine Counties
ADV-12 Issued November 2, 1995



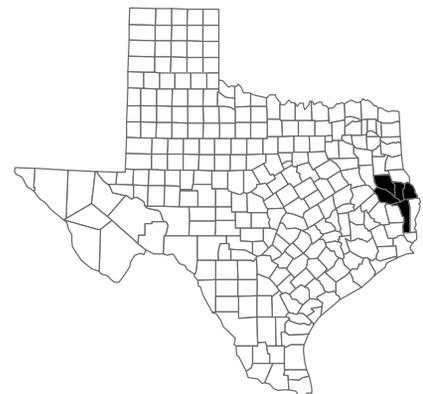
Advisory Area:
Sam Rayburn Reservoir

Contaminant of Concern:
Mercury (Hg)

Species Affected:
Freshwater drum and largemouth bass

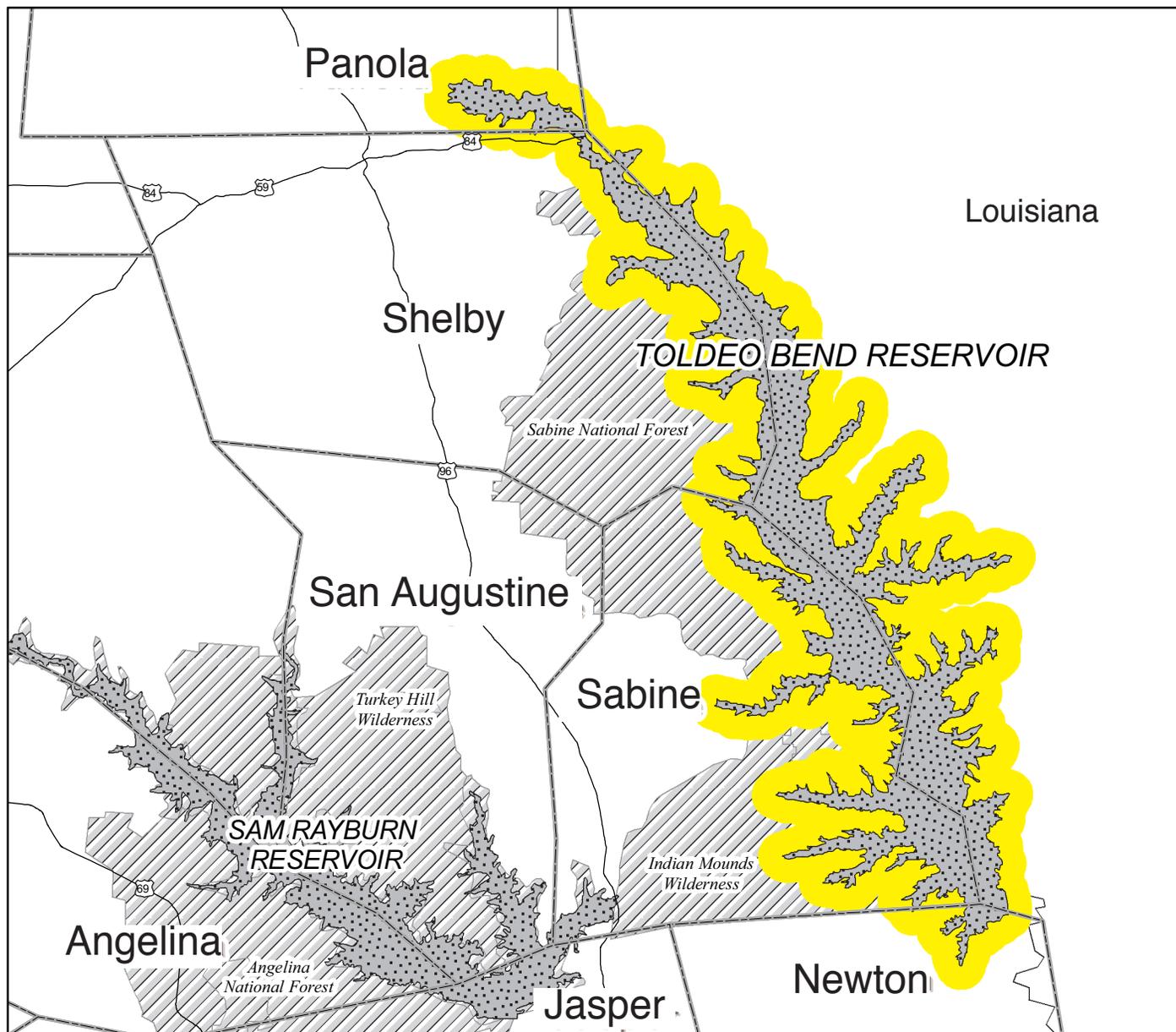
Consumption Advice:

1. Adults should limit consumption of freshwater drum and largemouth bass to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of freshwater drum and largemouth bass to no more than two (2) four ounce (4 oz) meals per month.



Toledo Bend Reservoir

Newton, Panola, Sabine, and Shelby Counties
ADV-12 Issued November 2, 1995



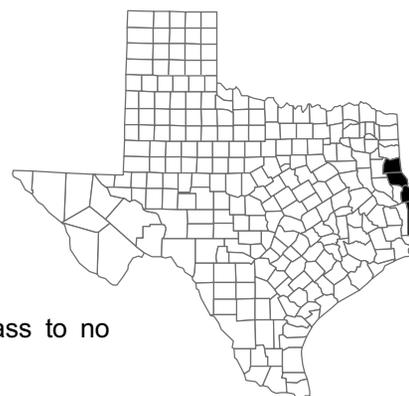
Advisory Area:
Toledo Bend Reservoir

Contaminant of Concern:
Mercury (Hg)

Species Affected:
Freshwater drum and largemouth bass

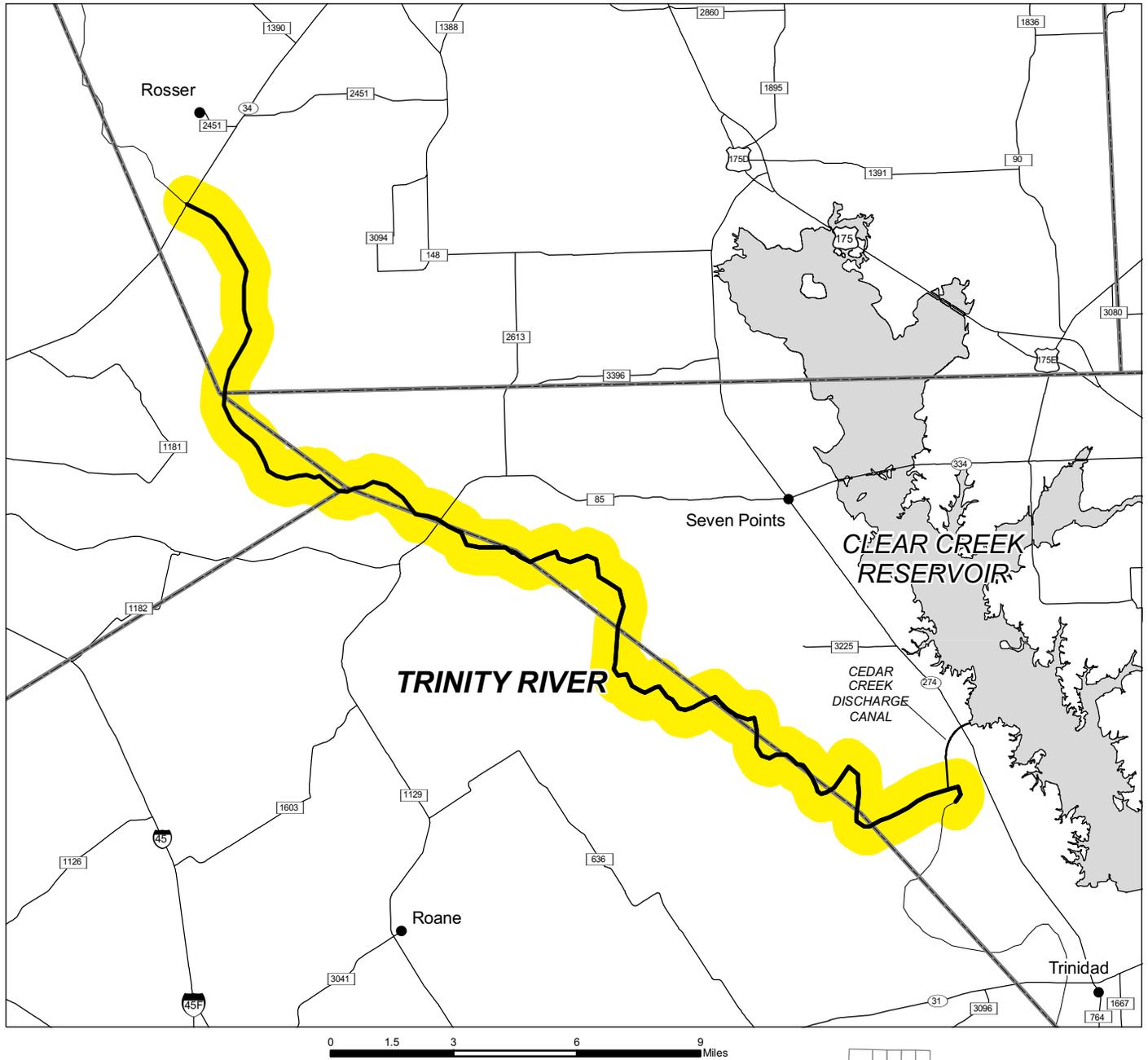
Consumption Advice:

1. Adults should limit consumption of freshwater drum and largemouth bass to no more than two (2) eight ounce (8 oz) meals per month.
2. Children under twelve (12) years old should limit consumption of freshwater drum and largemouth bass to no more than two (2) four ounce (4 oz) meals per month.



Trinity River

Ellis, Henderson, Kaufman and Navarro Counties
ADV-25 Issued September 13, 2002



Advisory Area:

Trinity River from Texas State Highway 34 bridge downstream to its confluence with the discharge canal of Cedar Creek Reservoir

Contaminants of Concern:

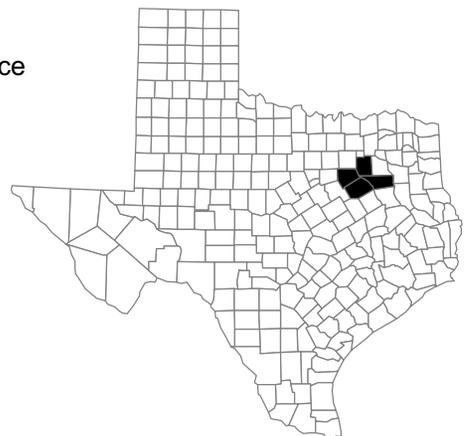
Chlordane, DDE, and Polychlorinated Biphenyls (PCBs)

Species Affected:

All gar species

Consumption Advice:

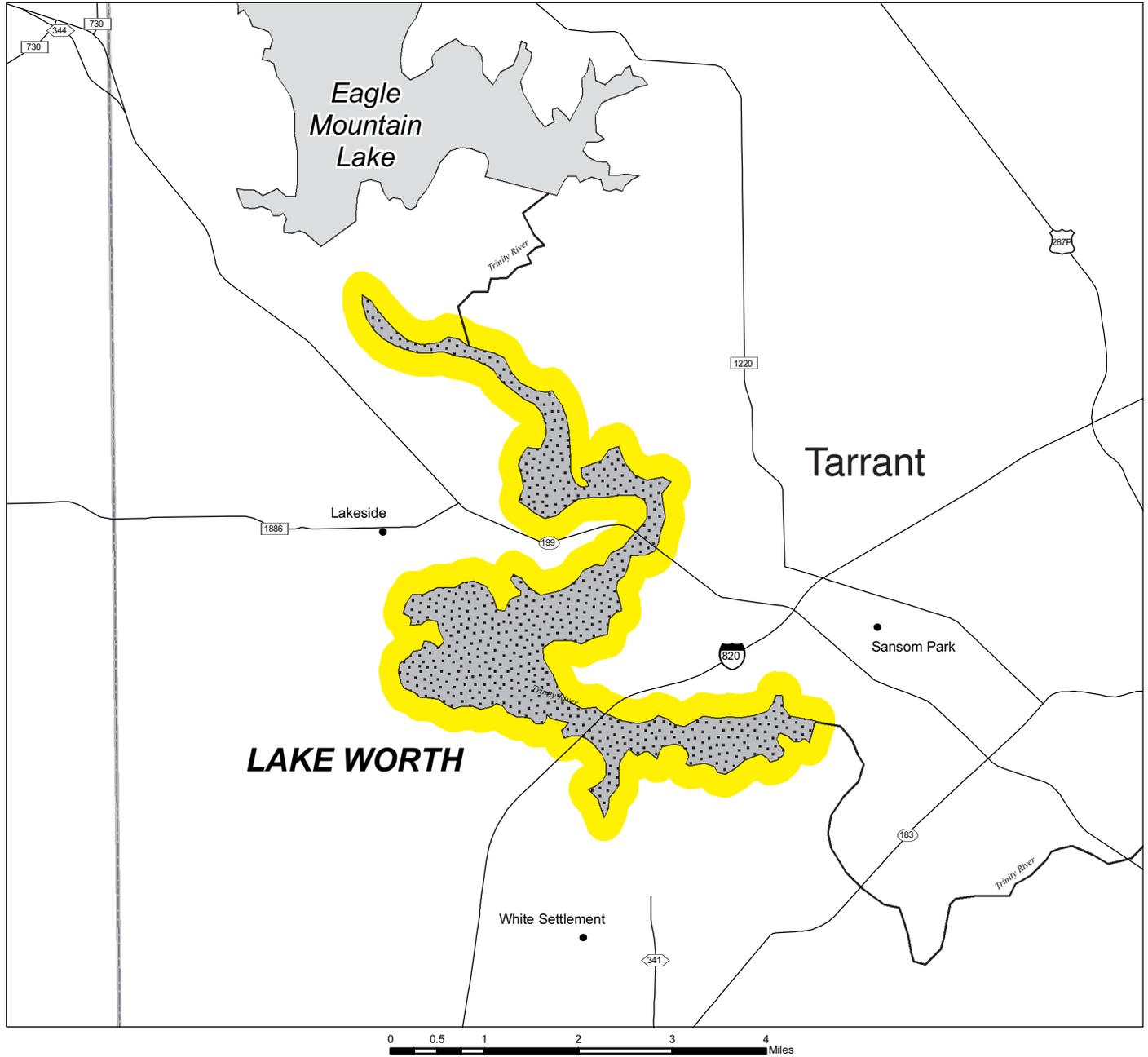
Persons should not consume any gar species from these waters.



Lake Worth

Tarrant County

ADV-18 Issued April 19, 2000



Advisory Area:

Lake Worth

Contaminants of Concern:

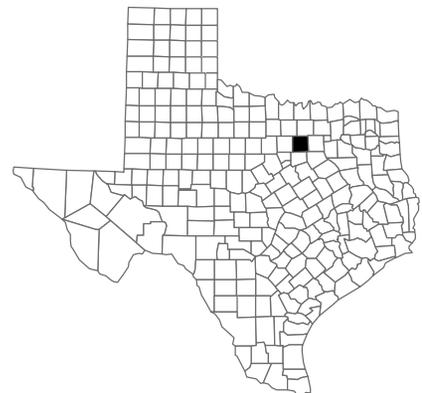
Polychlorinated Biphenyls (PCBs)

Species Affected:

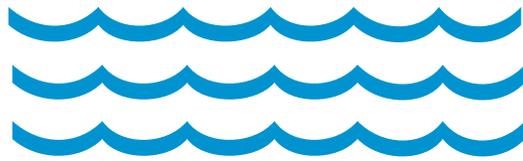
All species of fish

Consumption Advice:

Persons should not consume any species of fish from these waters.



O.K.



Rescinded Waters

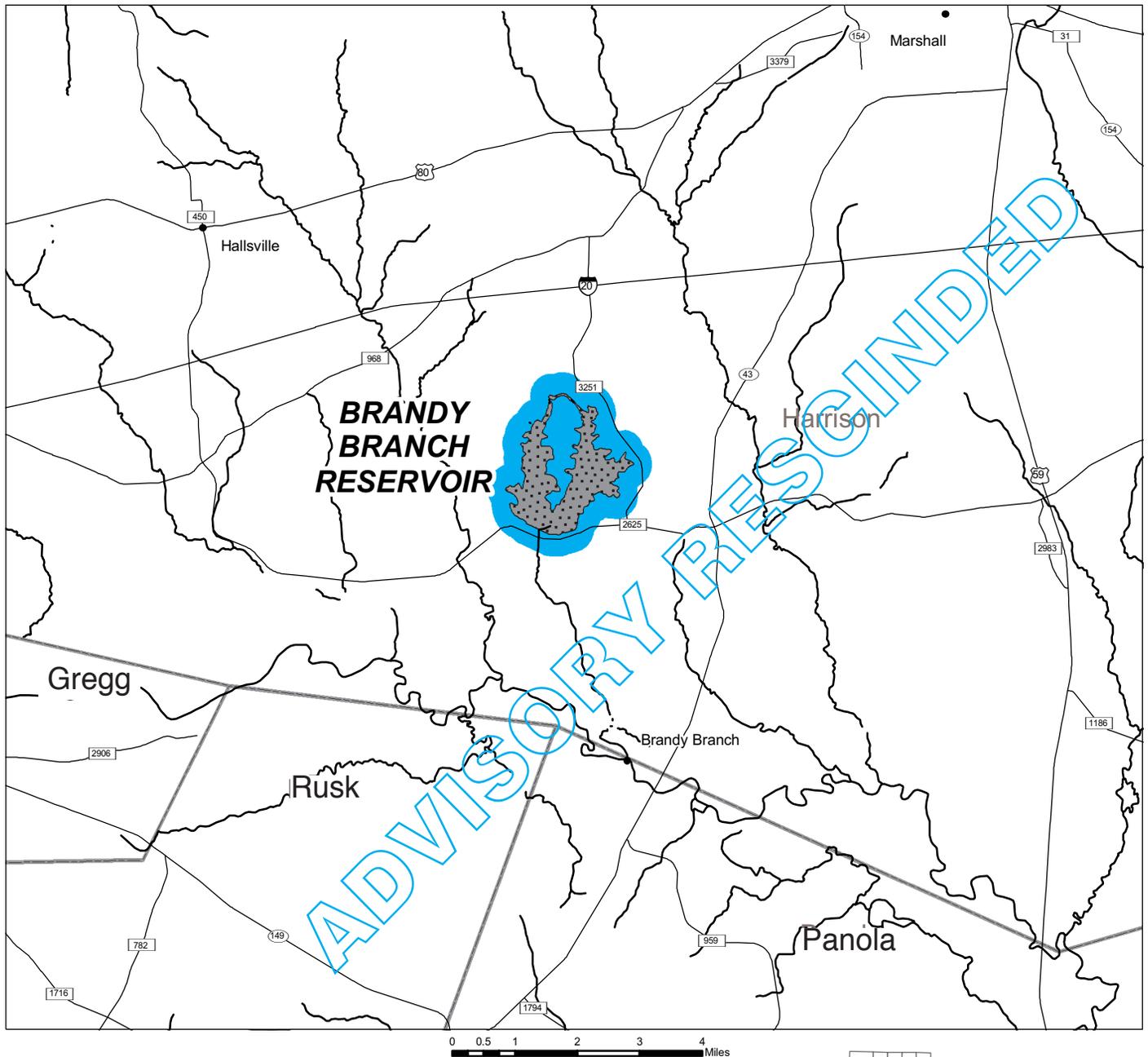
Rescinded waters are waters where advisories or bans existed. Reevaluation of fish or crab tissues indicates contaminant levels are acceptable and consumption of fish or crabs no longer poses a human health concern.

Brandy Branch Reservoir

Harrison County

ADV-4 Issued May 11, 1992

ADV-27 Rescinded October 14, 2003



Advisory Area:

Brandy Branch Reservoir

Advisory Rescinded:

Fish tissue samples collected from Brandy Branch Reservoir in the area covered by ADV-4 indicate selenium levels are acceptable. Additional analyses of these fish tissue samples did not indicate any other contaminants of concern. Therefore, the Brandy Branch Reservoir fish consumption advisory (ADV-4 issued May 11, 1992) is hereby rescinded effective October 14, 2003 by ADV-27.

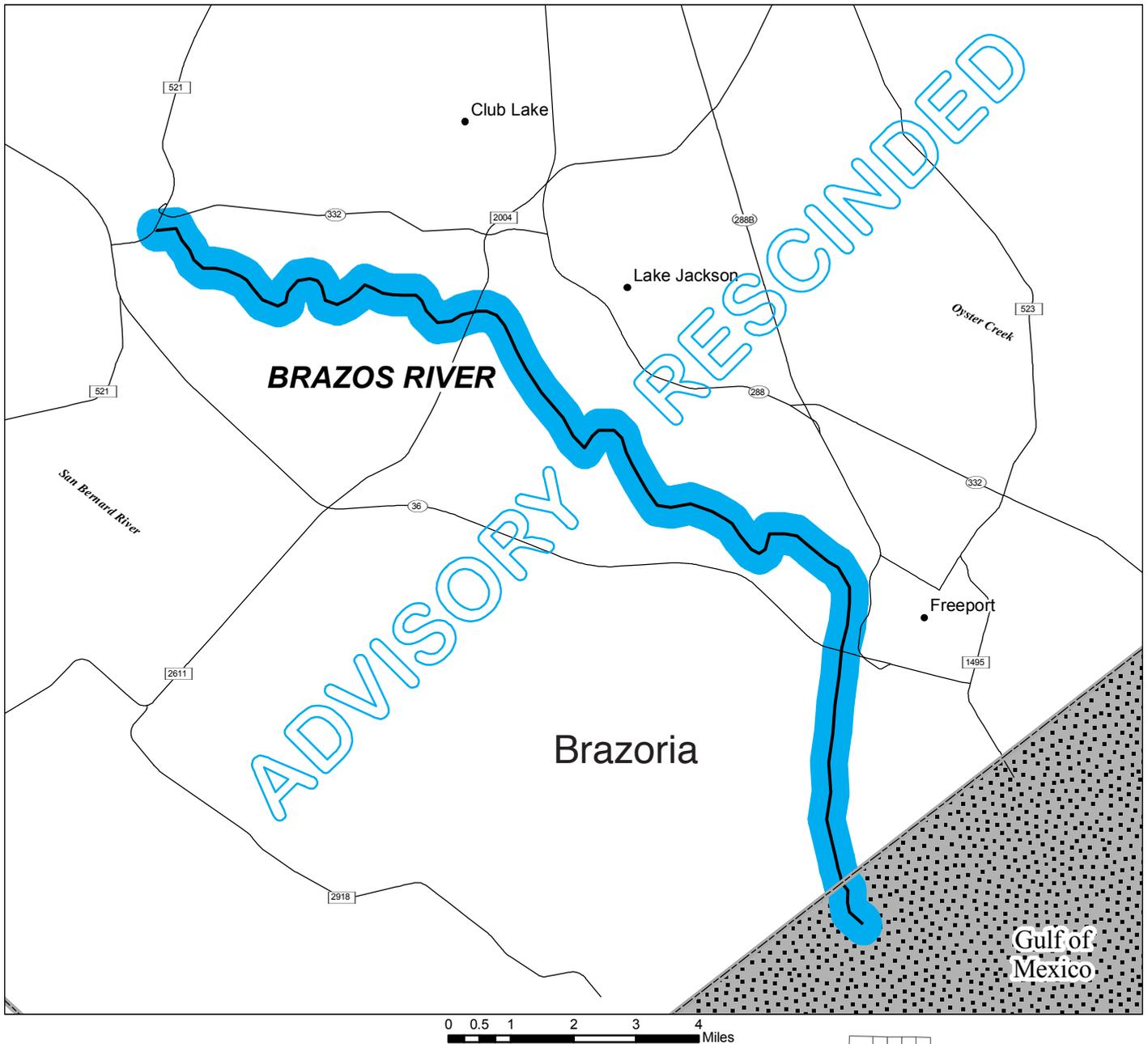


Brazos River

Brazoria County

ADV-1 Issued September 19, 1990

ADV-15 Rescinded July 9, 1997

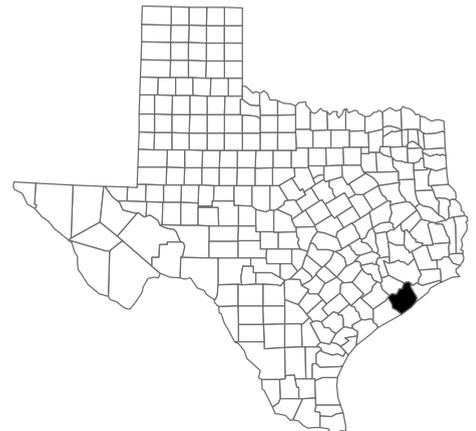


Advisory Area:

The Brazos River and all contiguous waters south and east of the FM 521 bridge near Brazoria to the mouth of the river.

Advisory Rescinded:

Fish tissue samples collected from the Brazos River in the area covered by ADV-1 indicate that concentrations of dioxins and furans have decreased to acceptable levels. Additional analysis of these fish tissue samples did not indicate any other contaminants of concern. Therefore, the fish consumption advisory (ADV-1 Issued September 19, 1990) for the Brazos River, and all contiguous waters south and east of the FM 521 bridge near Brazoria to the mouth of the river is hereby rescinded effective July 9, 1997 by ADV-15.

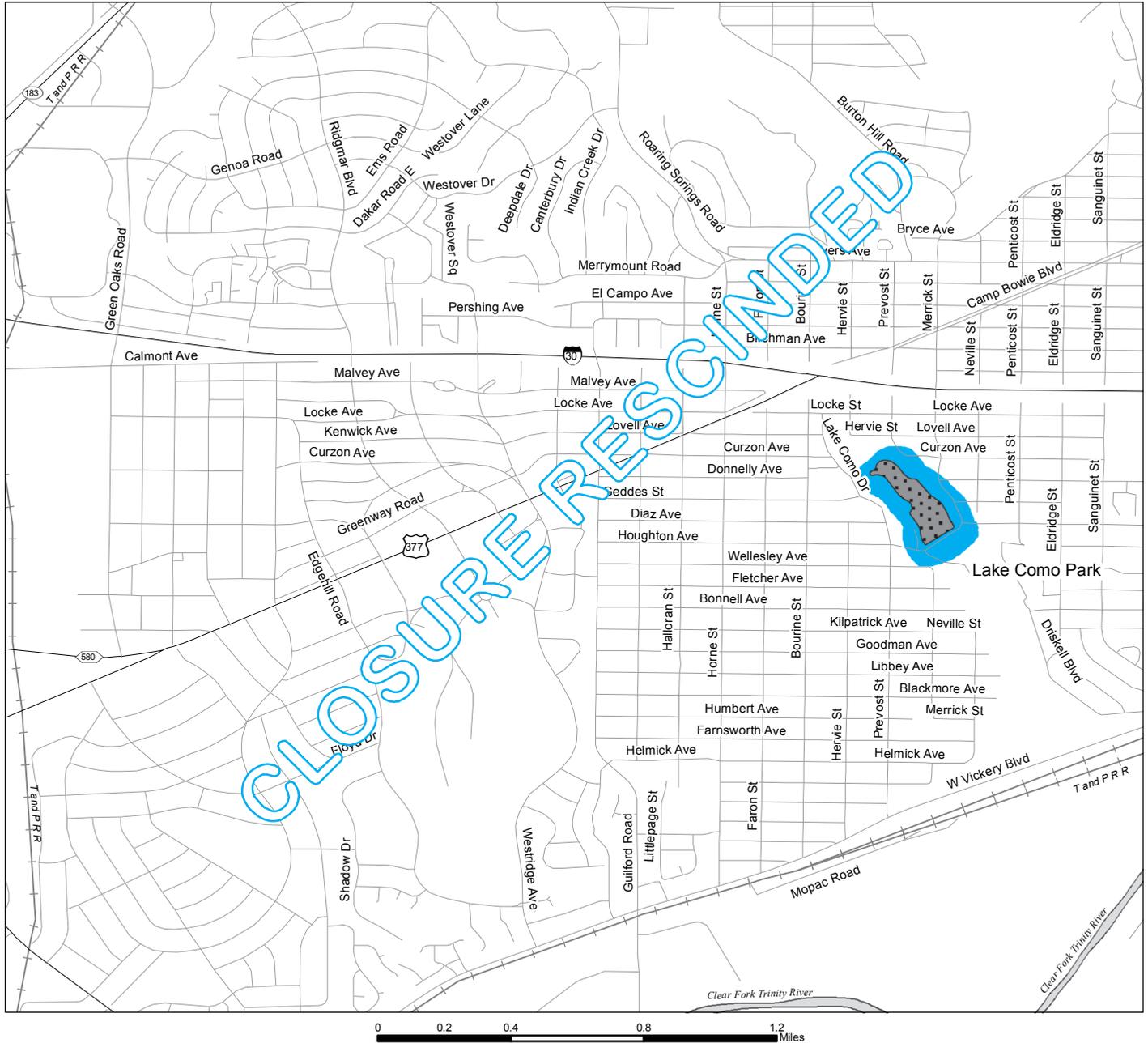


Lake Como

Tarrant County

AL-10 Issued April 5, 1995

AL-15 Rescinded September 25, 2007



Prohibited Area:

Lake Como

Prohibited Area Rescinded:

Fish tissue samples collected from Lake Como in the area covered by AL-10 indicate chlordane, DDE, Dieldrin, and PCB levels are acceptable. Additional analyses of these fish tissue samples did not identify any other contaminants of concern. Therefore, the Lake Como fish consumption ban (AL-10 issued April 5, 1995) is hereby rescinded effective September 25, 2007 by AL-15.

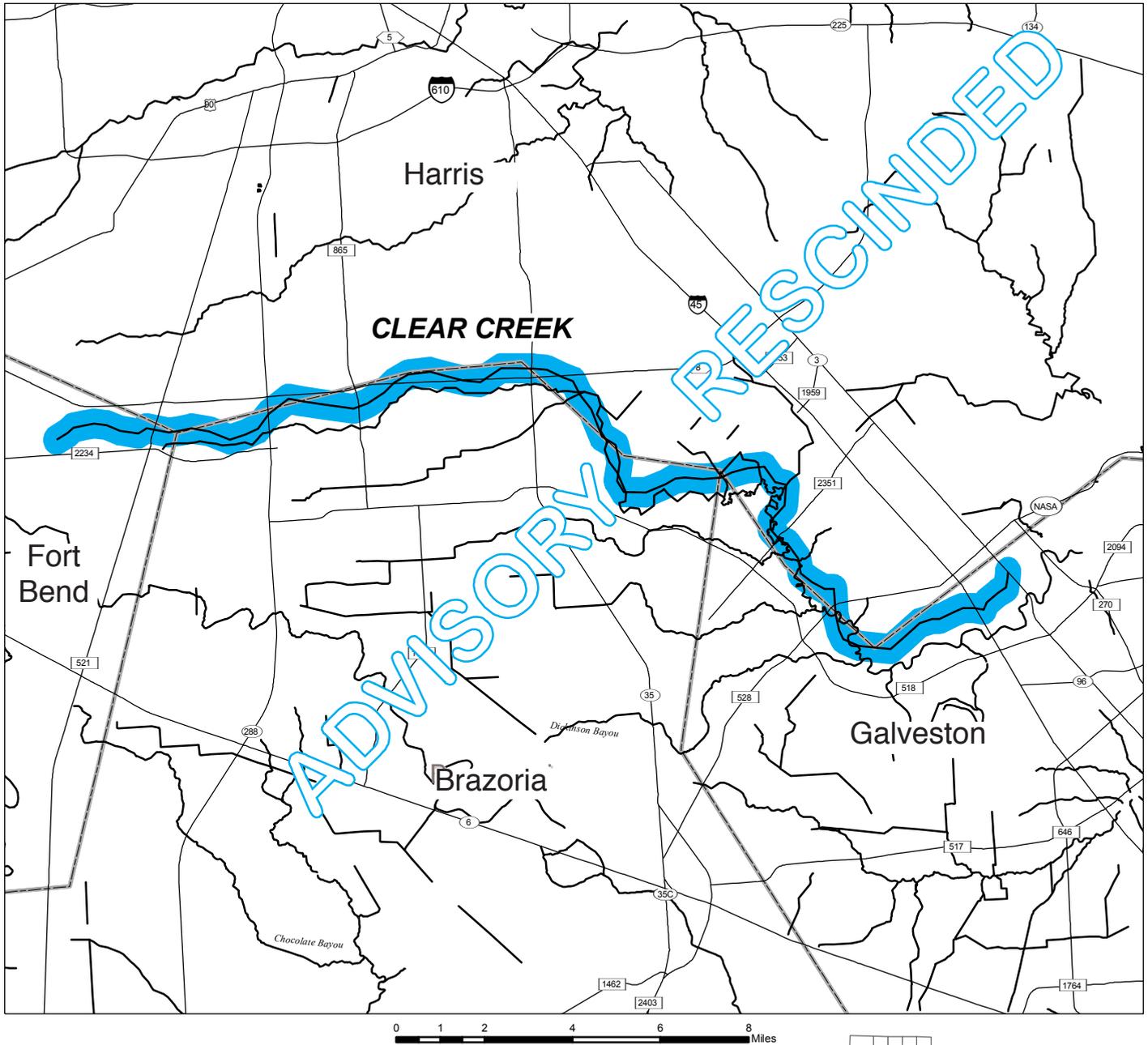


Clear Creek

Brazoria, Galveston and Harris Counties

ADV-7 Issued November 18, 1993

ADV-21 Rescinded October 9, 2001

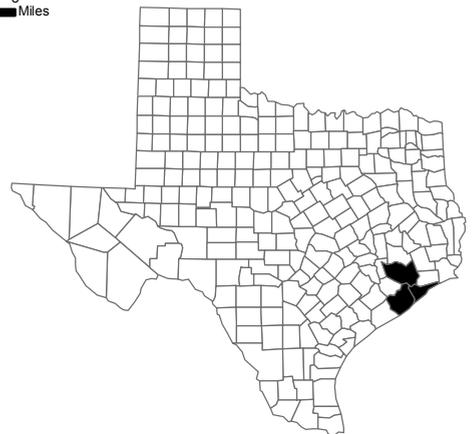


Advisory Area:

Clear Creek upstream and west of Texas Highway 3

Advisory Rescinded:

Fish and blue crab tissue samples collected from Clear Creek in the area covered by ADV-7 indicate that concentrations of contaminants have decreased to acceptable levels. Additional analyses of these fish and blue crab tissue samples did not indicate any other contaminants of concern. Therefore, the Clear Creek fish consumption advisory (ADV-7 issued November 18, 1993) is hereby rescinded effective October 9, 2001 by ADV-21.

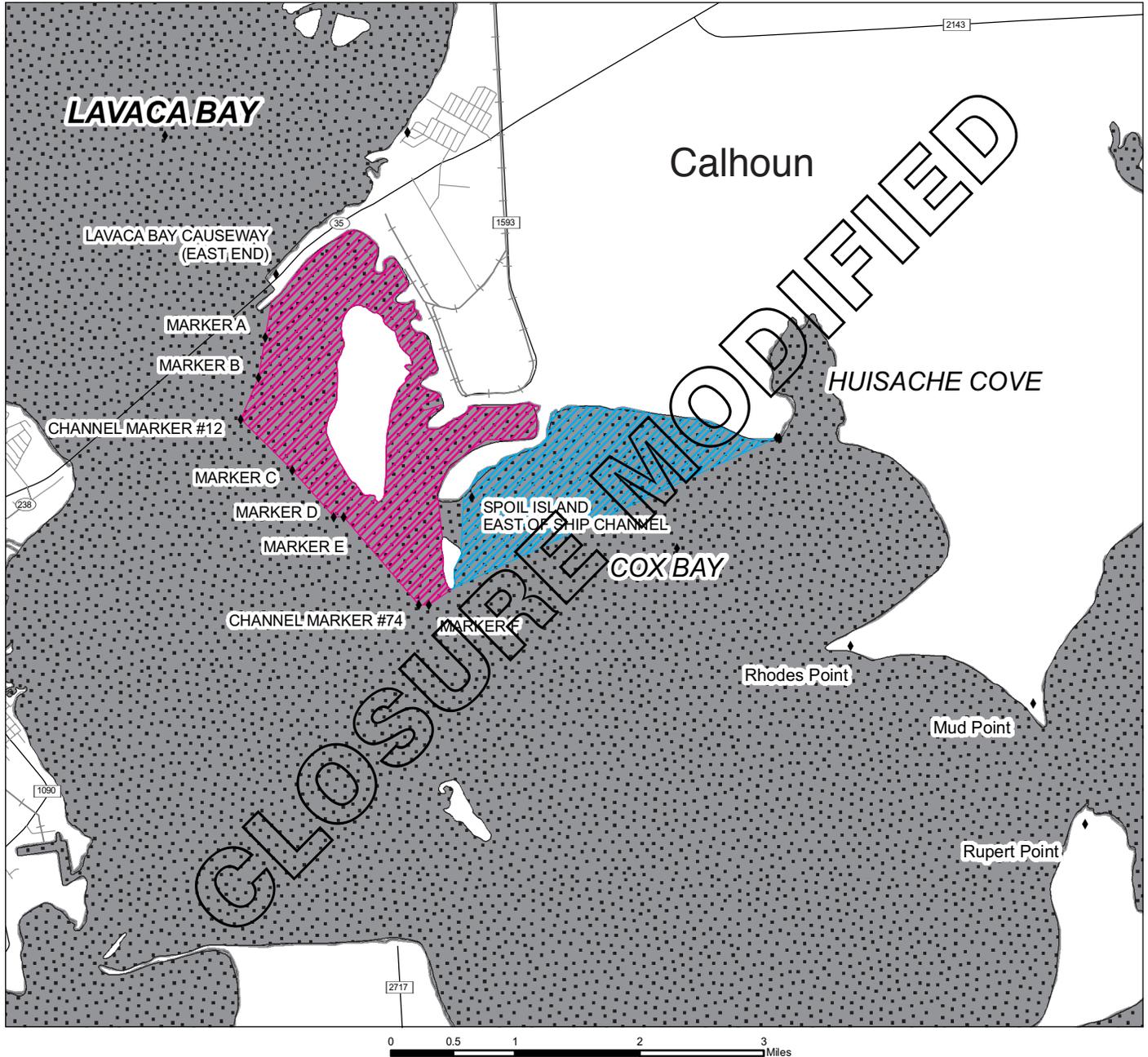


Cox Bay

Calhoun County

AL-1 Issued April 21, 1998

AL-13 Rescinded January 13, 2000



Modified Area:

The area of Cox Bay inshore of a line beginning at the southernmost point of land on the spoil island east of the ship channel northeast to Cox Point.

Prohibited Area Modification:

Fish and blue crab samples collected from Cox Bay in the area covered by AL-1 indicate that concentrations of mercury have decreased to an acceptable level. Therefore, the prohibited area of Cox Bay is hereby rescinded effective January 13, 2000 by AL-13.

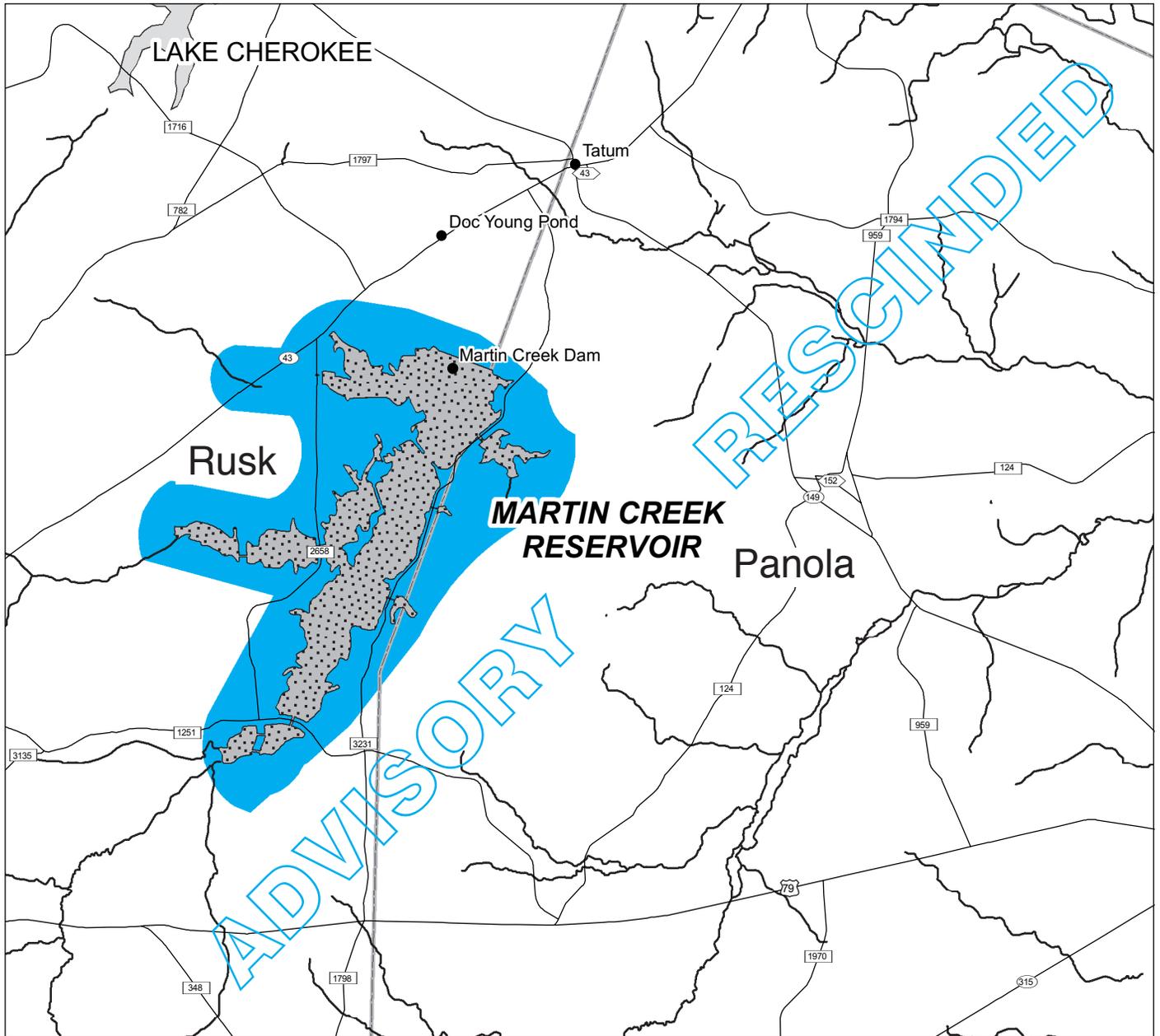


Martin Creek Reservoir

Panola and Rusk Counties

ADV-4 Issued May 11, 1992

ADV-27 Rescinded October 14, 2003



Advisory Area:
Martin Creek Reservoir

Advisory Rescinded:
Fish tissue samples collected from Martin Creek Reservoir in the area covered by ADV-4 indicate selenium levels are acceptable. Additional analyses of these fish tissue samples did not indicate any other contaminants of concern. Therefore, the Martin Creek Reservoir fish consumption advisory (ADV-4 issued May 11, 1992) is hereby rescinded effective October 14, 2003 by ADV-27.

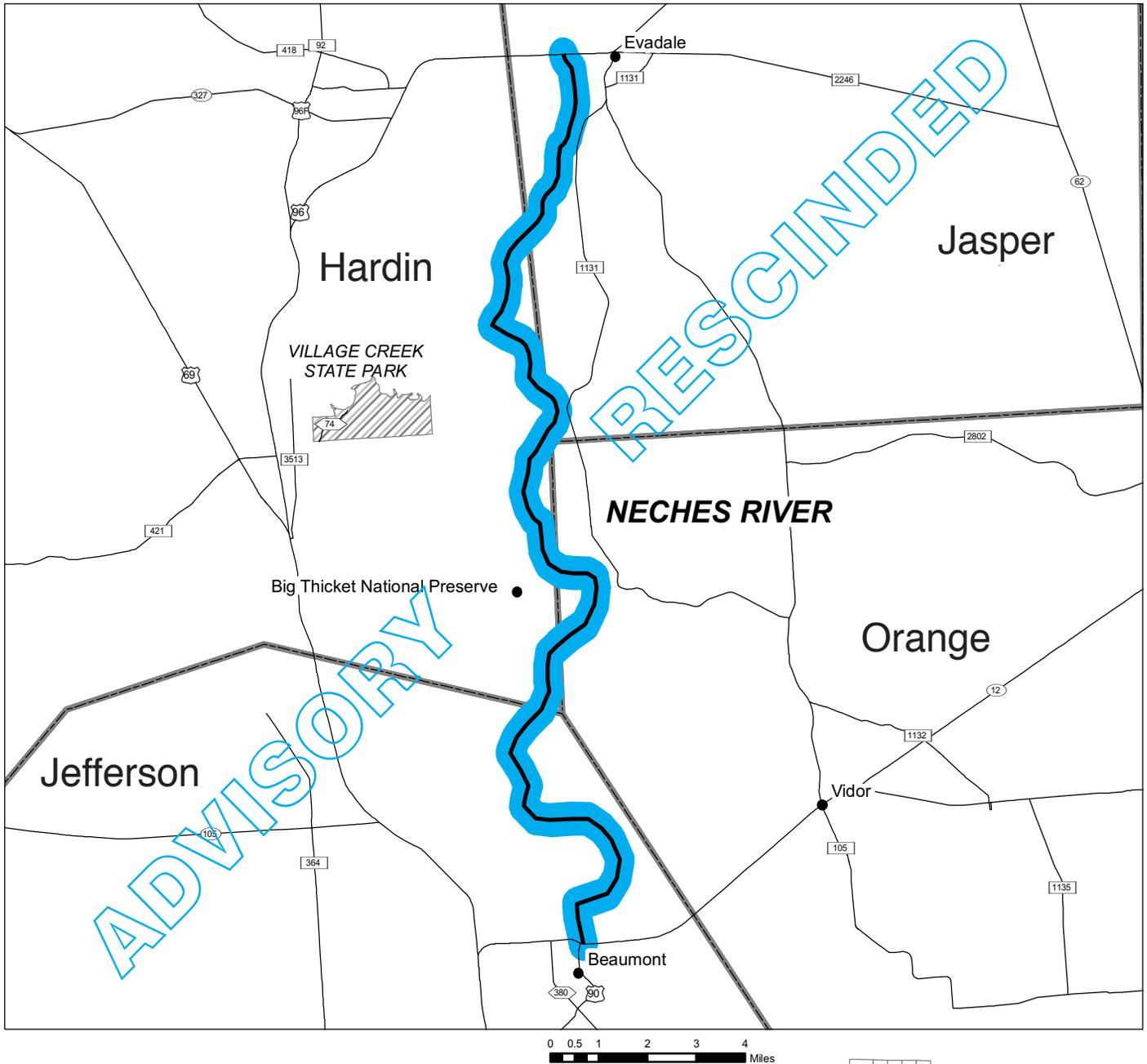


Neches River

Hardin, Jasper, Jefferson and Orange Counties

ADV-2 Issued September 19, 1990

ADV-13 Rescinded December 5, 1995

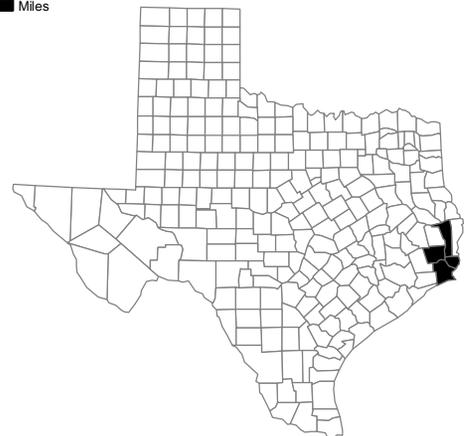


Advisory Area:

The Neches River and all contiguous waters south of the U.S. 96 bridge near Evadale to the Interstate 10 bridge near Beaumont

Advisory Rescinded:

Fish tissue samples collected from the Neches River in the area covered by ADV-2 indicate that concentrations of dioxin have decreased to an acceptable level. Additional analysis of these fish tissue samples did not indicate any other contaminants of concern. Therefore, the fish consumption advisory (ADV-2 Issued September 19, 1990) is hereby rescinded effective December 5, 1995 by ADV-13.

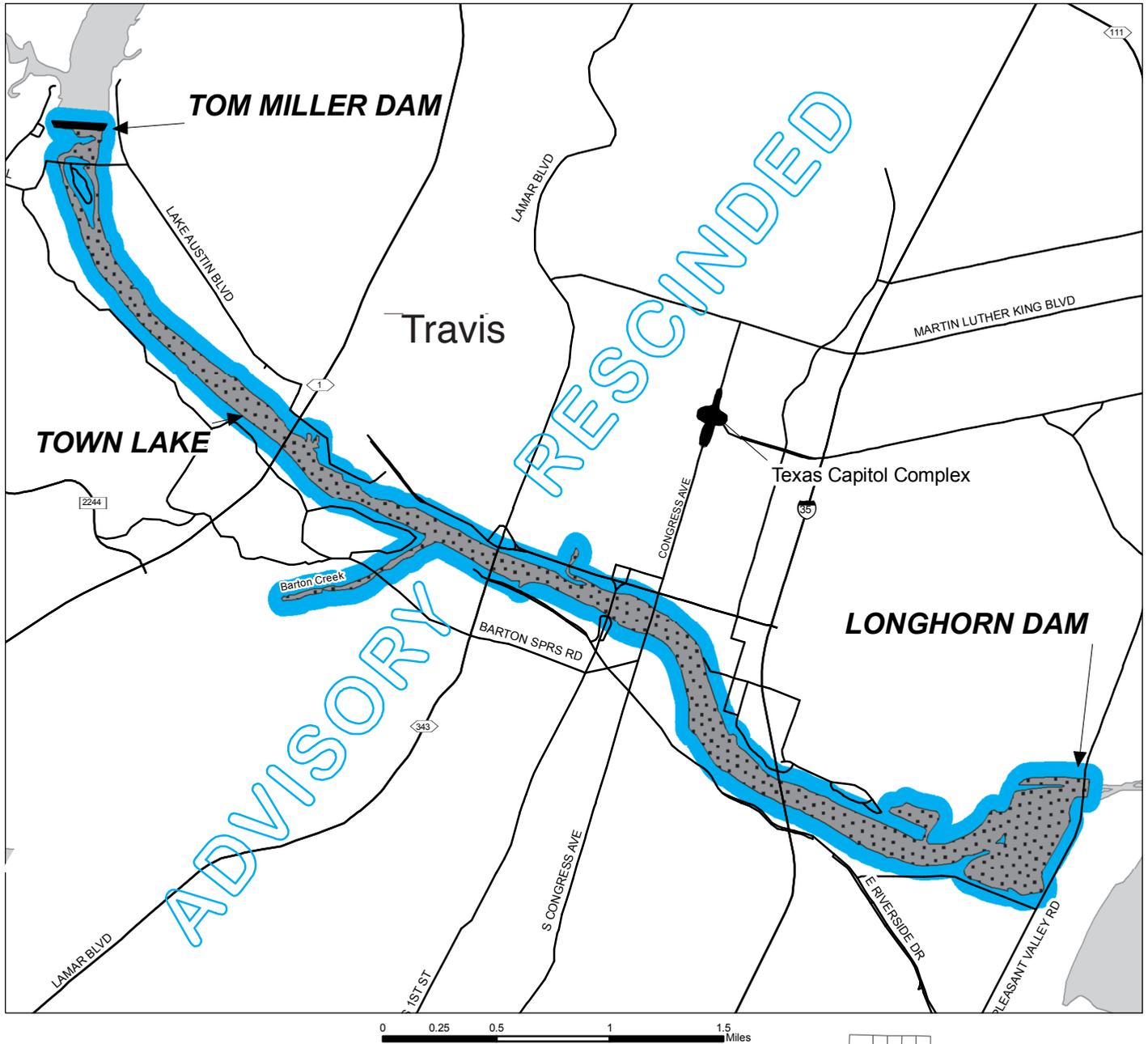


Town Lake

Travis County

(not numbered) Issued July 10, 1987

ADV-17 Rescinded October 27, 1999



Advisory Area:

Town Lake

Advisory Rescinded:

Fish tissue samples collected from Town Lake in the area covered by an advisory (not numbered) issued July 10, 1987 indicate that chlordane levels are acceptable. Additional analysis of these fish tissue samples did not indicate any other contaminants of concern. Therefore, the Town Lake fish consumption advisory (not numbered) issued July 10, 1987 is hereby rescinded effective October 27, 1999 by ADV-17.

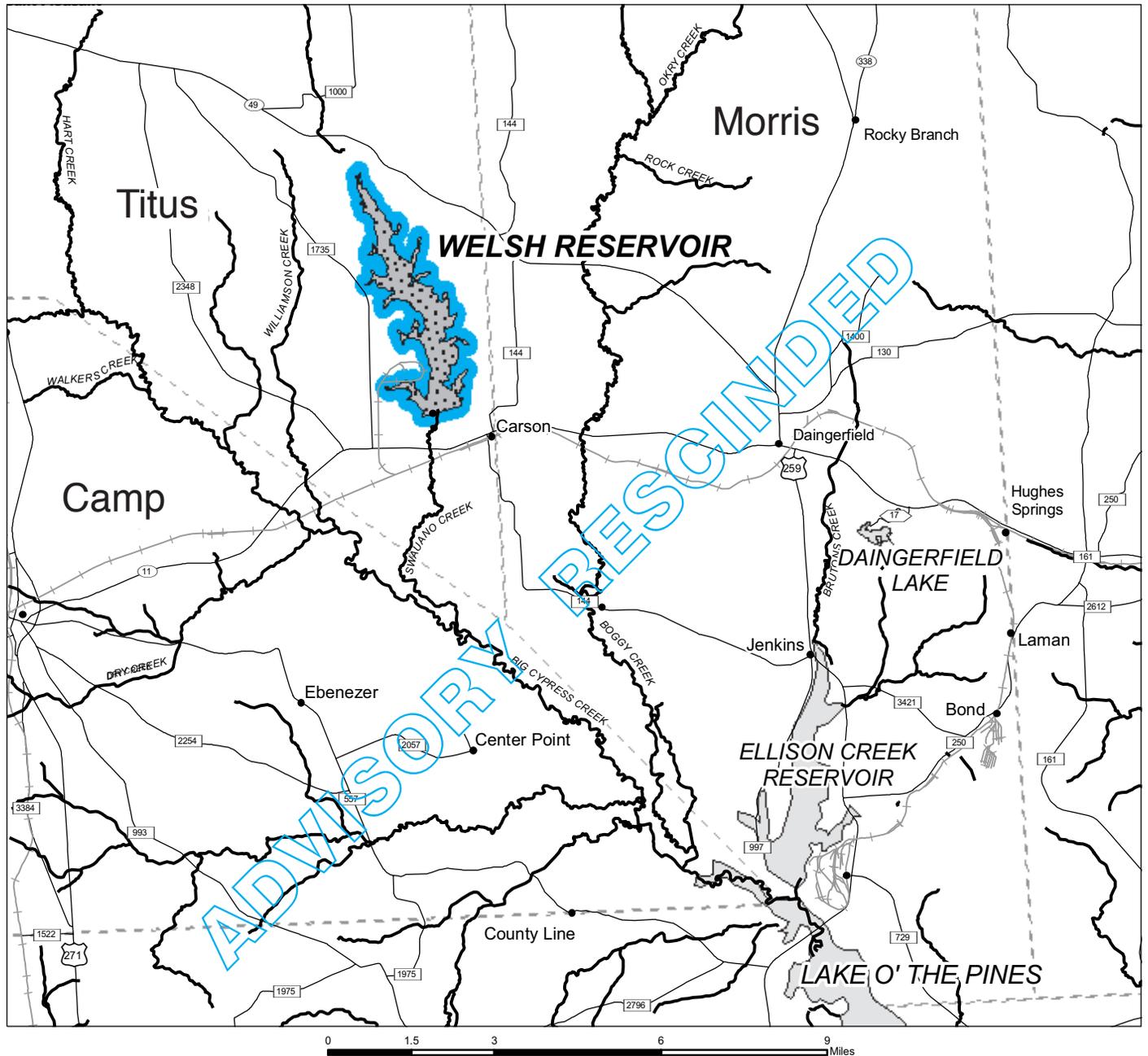


Welsh Reservoir

Titus County

ADV-4 Issued May 11, 1992

ADV-27 Rescinded October 14, 2003



Advisory Area:
Welsh Reservoir

Advisory Rescinded:

Fish tissue samples collected from Welsh Reservoir in the area covered by ADV-4 indicate selenium levels are acceptable. Additional analyses of these fish tissue samples did not indicate any other contaminants of concern. Therefore, the Welsh Reservoir fish consumption advisory (ADV-4 issued May 11, 1992) is hereby rescinded effective October 14, 2003 by ADV-27.



Bibliography

Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs
<http://www.atsdr.cdc.gov/toxfaq.html>

Agency for Toxic Substances and Disease Registry (ATSDR) Public Health Statements
<http://www.atsdr.cdc.gov/phshome.html>

Biology Department, University of Massachusetts, Amherst, MA
<http://www.bio.umass.edu/biology/conn.river/bowfin.html>

California Department of Fish and Game, Marine Region
<http://www.dfg.ca.gov/mrd/parasites.html>

Florida Fish and Wildlife Conservation Commission
<http://myfwc.com/Fishing/Fishes/bass.html>

Food & Drug Administration / Environmental Protection Agency Consumer Advice (Mar 19, 2004)
<http://www.cfsan.fda.gov/~dms/admehg3.html>

Food and Drug Administration, FDA
<http://www.cfsan.fda.gov/seafood1.html>

Eangler.com www.eangler.com
http://www.espn.go.com/outdoors/general/sf_enc_SouthernFlounder.html

Indian River County, Florida
<http://indian-river.fl.us/fishing/fish/drumblac.html>

Kingfisher Inn
<http://www.lagunamadre.net/Fishreport.htm>

LandBigFish, 4551 Whyem Drive, Akron, Ohio 44319
<http://www.landbigfish.com/fish/fish.cfm?ID=37>

Microsoft Office
<http://office.microsoft.com/en-us/default.aspx>

Ohio Department of Natural Resources, Division of Wildlife
<http://ohiodnr.com/wildlife/Fishing/aquanotes-fishid/whtebass.htm>

Sea-EX, Bracken Ridge, Australia
<http://www.sea-ex.com/fishphotos/blacktipshark.htm>

State of Kentucky, Division of Water
<http://www.water.ky.gov/sw/advisories/fish.htm>

USDA National Nutrient Database for Standard Reference, Release 18
<http://www.nal.usda.gov/fnic/foodcomp/search/>

United States Environmental Protection Agency (EPA) Chemical Fact Sheets
<http://www.epa.gov/waterscience/fish/chemfacts.html>

U.S. Fish and Wildlife Service, Paul Kerris
<http://www.fws.gov/pictures/lineart/paulkerris/>

University of Florida Institute of Food and Agriculture Sciences
http://edis.ifas.ufl.edu/TOPIC_Fish_Health

University of Georgia College of Agricultural & Environmental Sciences Cooperative Extension Service
http://www.wildlifemanagement.info/publications/fish_ponds_2.pdf

Wisconsin Dept of Natural Resources 101 S. Webster Street Madison, Wisconsin
<http://www.dnr.state.wi.us/org/water/fhp/fish/3dblgill.htm>

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Seafood and Aquatic Life Group
P.O. Box 149347
Mail Code 2829
Austin, Texas 78714-9347

(512) 834-6757 main (512) 834-6762 fax
www.dshs.state.tx.us/seafood

January 2009