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# Basin 25

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## Gulf of Mexico



## Gulf of Mexico Narrative Summary

For purposes of water quality management, the Gulf of Mexico is classified as a single segment and basin (Segment 2501). The Gulf of Mexico includes about 40 major estuarine systems plus the Mississippi/Atchafalaya River Plume, encompassing more than 23,938 square miles. The entire region is part of the Gulf Coastal Plain, which encompasses the Eastern and Western Gulf Plain and the Mississippi Alluvial Plain. The Gulf Coast is characteristic of a gently sloping lowland environment. Historical periods of coastal flooding and intense sediment deposition have contributed to formation of the Gulf of Mexico shoreline. Within the Texas portion of the Gulf from Sabine Lake on the eastern Texas-Louisiana border to the lower Laguna Madre near the US-Mexico border on the south, much of the shoreline area is comprised of extensive wetland areas, sandy beaches and barrier islands. The open water portion of the Gulf in Texas encompasses an area that covers approximately 3,879 square miles and includes 624 shoreline miles. The TNRCC has routinely monitored five surface water quality monitoring sites on the Gulf of Mexico over the past five years. The sites are typically located near the outer boundaries of classified bay segments from Sabine Lake to the Rio Grande and tend to reflect quality of the nearshore waters rather than the open gulf .

The Texas Department of Health issued on June 10, 1997 a consumption advisory for the Gulf of Mexico due to elevated concentrations of mercury in King Mackerel edible muscle tissue. The consumption advisory is dependent of length of the fish, but since part of the advisory suggests no-consumption, the fish consumption use is not supported for the segment. King Mackerel less than 37 inches are safe for unrestricted consumption. Adults are advised to limit consumption of fish in the 37 to 43 inch range to one eight-ounce meal per week, while women of child bearing age and children should limit consumption to one eight-ounce meal per month. For King Mackerel greater than 43 inches in length, the advisory recommends no-consumption.

# Gulf of Mexico Identified Water Quality Issues





# Gulf of Mexico Graphical Summary

Basin Map	Water Bodies									
	Segment 2501 Gulf of Mexico									
<b>DESIGNATED USE SUPPORT</b>										
Contact Recreation	S									
Noncontact Recreation	X									
Oyster Waters	NA									
<b>Fish Consumption</b>										
Human Health	NA									
Advisories/Closures	N									
<b>Aquatic Life</b>										
Dissolved Oxygen (Grab)	P									
Dissolved Oxygen (24-Hour)	NA									
Metals in Water	NA									
Organics in Water	NA									
Water Toxicity Tests	NA									
Sediment Toxicity Tests	NA									
Macrobenthos	NA									
Fish	NA									
<b>GENERAL USE SUPPORT</b>										
Water Temperature	S									
pH	S									

S = Support; P = Partial Support; N = Nonsupport; T = Threatened; NC = No Concern; C = Concern; NA = Not Assessed; X = Not Applicable

**Gulf of Mexico Graphical Summary (Continued)**

Basin Map	Water Bodies										
	Segment 2501 Gulf of Mexico										
<b>WATER QUALITY CONCERNS</b>											
Contact Recreation		X									
Noncontact Recreation		X									
Fish Tissue		NA									
Sediment		NA									
Narrative		NC									
<b>Nutrient Enrichment</b>											
Ammonia Nitrogen		NC									
Nitrite + Nitrate Nitrogen		NC									
Orthophosphorus	NC										
Total Phosphorus	NC										
Chlorophyll <i>a</i>	NC										
<b>Aquatic Life</b>											
Dissolved Oxygen	X										
Metals in Water	NA										
Organics in Water	NA										
Water Toxicity Tests	NA										
Sediment Toxicity Tests	NA										

# Gulf of Mexico

## Segment 2501 - Gulf of Mexico

**Water body description:** From the Gulf shoreline to the limit of Texas jurisdiction between Sabine Pass and the Rio Grande

**Water body classification:** Classified

**Water body type:** Ocean

**Water body length / area:** 3,879.00 Sq. miles

**Use support summary:** The aquatic life use is partially supported due to depressed dissolved oxygen concentrations near Sabine Pass. The contact recreation and general uses are supported near Sabine Pass. The fish consumption use is not supported throughout the Gulf due to elevated mercury concentrations in king mackerel. Restricted-consumption and no-consumption advisories, based on size of king mackerel, were issued by the Texas Department of Health in June 1997. Part of the advisory recommends no consumption of king mackerel larger than 43 inches in length. The oyster waters use was not assessed for the Gulf due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

**Additional information summary:** Projects are scheduled for dissolved oxygen and mercury in king mackerel to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

### Monitoring sites used in the assessment

Station	Station Description
13461	Gulf of Mexico Sabine Pass between jetties and adjacent to Texas Point
13463	Gulf of Mexico at Jefferson-Chambers County line
13465	Gulf of Mexico at Galveston in channel near Buoy R6



### Monitoring sites, continued

Station	Station Description
13467	Gulf of Mexico at Matagorda Ship CM 3 SE of Port O'Connor
13468	Gulf of Mexico at Port Aransas near end of South Jetty near Marker R-7

### Wastewater dischargers

Permit type	Number of outfalls
2501	Domestic

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
09/05/1994	Northwestern Gulf of Mexico, near High Island, Texas	1,100,328	Physical Damage/Trauma
09/29/1994	Gulf beach near Freeport, Texas	20,000	Physical Damage/Trauma
06/23/1995	Gulf of Mexico, 2-3 miles offshore, near Sea Rim State Park	50,000	Physical Damage/Trauma
06/26/1995	Along the coast 10 miles N. of High Island & 3 miles S. of Sea Rim Park	200,000	Physical Damage/Trauma
07/27/1995	East Beach at Galveston Island	1,000	Physical Damage/Trauma
08/22/1995	Pond on Padre Island off Whitecap W of BridgePoint Apts	302	Low Dissolved Oxygen
10/13/1995	Gulf of Mexico, Pt O'Connor Jetties	30	Disease
10/16/1995	Gulf of Mexico out approx. 3 miles	43,000	Disease
03/18/1996	From Bolivar Roads to Gulf of Mexico	150	Pollutant
05/15/1996	Gulf Coast from Louisiana to Matagorda Bay area	1,000,000	Disease
05/16/1996	Isla del Sol (canal)/Gulf of Mexico	1,000	Low Dissolved Oxygen
09/05/1997	Gulf of Mexico 0.25 miles off the Galveston jetties, moving westward	100,000	Physical Damage/Trauma
09/17/1997	Gulf of Mexico west of swing bridge on Sargent Beach	148,000	Disease

**Historical fish kills, continued**

<b>Start date</b>	<b>Location</b>	<b>Fish killed</b>	<b>Suspected cause</b>
10/31/1997	Port Mansfield Pass S to Access Rd 5, Andy Bowie Park, Gulf of Mexico	26,400	Disease
11/05/1997	Padre Island National Seashore from mile marker 40 to mile marker 63	120,000	Disease
07/21/1998	Gulf of Mexico at Sea Rim State Park	150,000	Physical Damage/Trauma

