

SALTY TALE

The brackish waters of Breton Sound are some of the richest oyster grounds in America. But over the years, oystering has been threatened by destruction of marsh lands and an intrusion of salty water from the Gulf. The Caernarvon Diversion was supposed to restore the basin's natural balance by introducing fresh water from the Mississippi River. While most oyster reefs thrived, oyster farmers unhappy with the results sued. The result: \$2 billion in court awards that threaten to bankrupt the state and derail future diversion projects.

1 A PINCH OF SALT

Oysters grow best in a narrow range of salinity. Water with salt content below 5 parts per thousand is too fresh, while water above 15 parts per thousand is too salty. Oysters also need a hard bottom to grow on and a strong current to carry in food – a single oyster may take in 100 gallons of water per day. On their leased grounds, farmers spend years building up reefs using discarded oyster shells and seeding future harvests with young oysters found on public water bottoms. And they hedge their bets, taking leases inshore and farther offshore to follow natural shifts in the salinity band.

WATER TOO FRESH

0 to 5 ppt saltwater: Oysters can survive in fresh water for a few weeks before dying. Fresh water also spurs growth of Eurasian milfoil, a grass that can smother beds and make a lease impassable. The fresh water also carries in sediment that buries the oysters in mud.

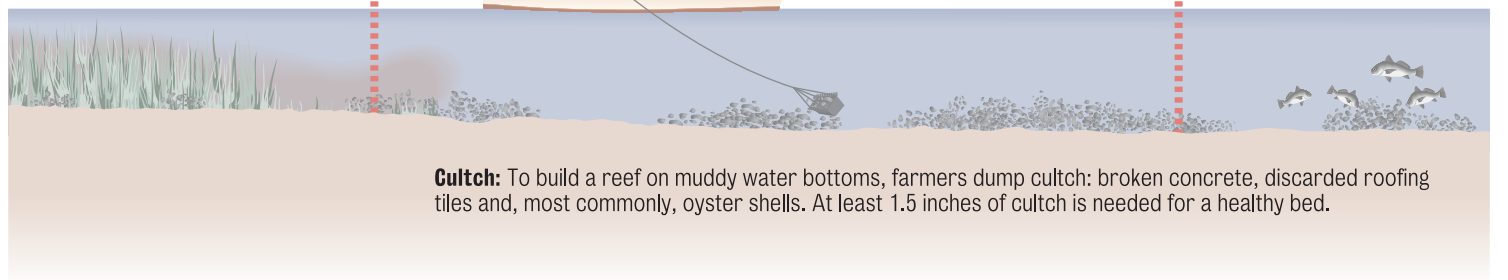
PRIME OYSTERING WATER

5 to 15 ppt saltwater: Oystering is more like farming than fishing: The beds are prepared with cultch, seeded and, about two years later, harvested.

WATER TOO SALTY

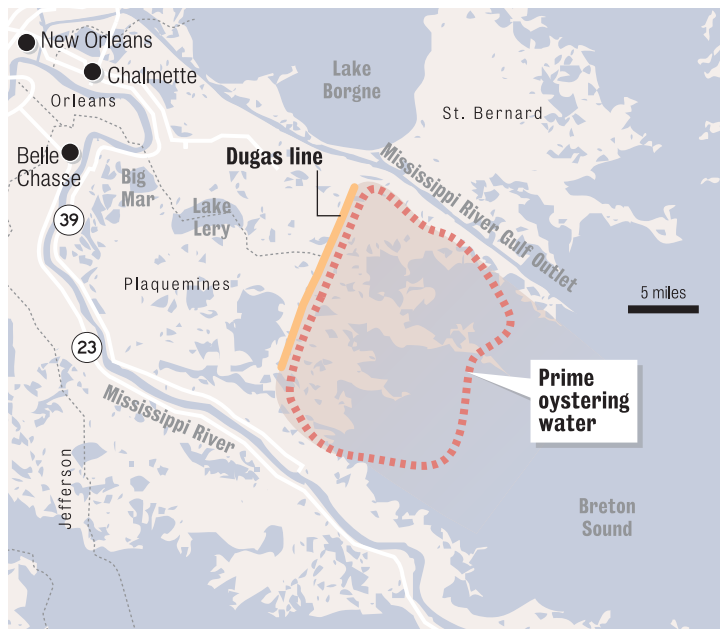
15 to 40 ppt saltwater: Salty water brings in predators, notably the rapacious black drum, which eat oysters – shell and all. But salty water also gives oysters more flavor, so some farmers leave their crop here for a short time.

Seeding: Farmers gather young oysters called spat from the public reefs on the Gulf side of Breton Sound and plant them on their private leases.



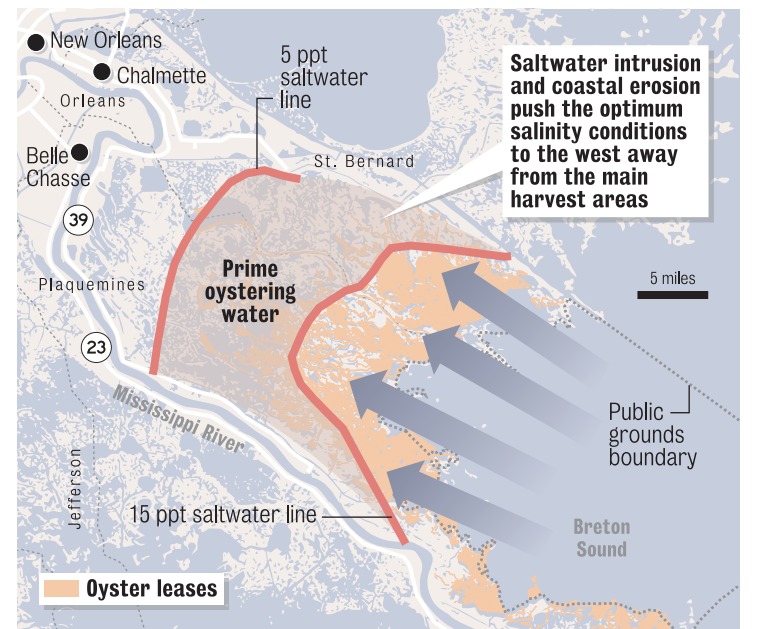
2 STABLE GROUNDS: 1960

Until 1960, oysters generally didn't grow well west of the so-called "Dugas line," where salinity was typically below 5 parts per thousand.



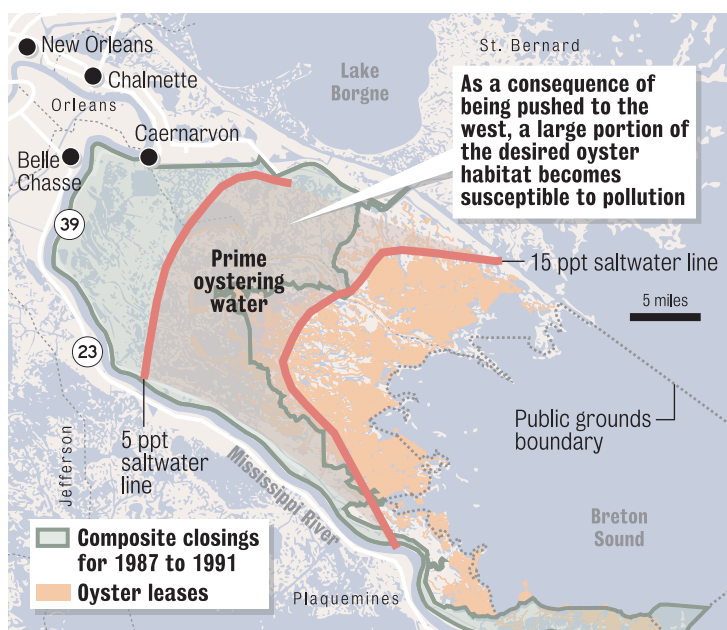
3 SALT SURGE: 1970 to 1990

As Gulf water penetrated the basin, it pushed the 5 ppt line far to the west. The public oyster grounds were now too salty, as were some leased grounds in the east part of the sound.



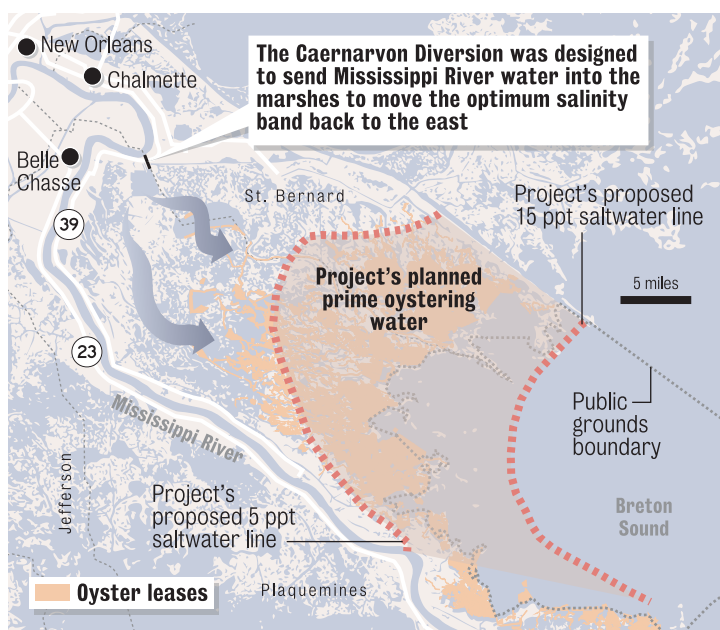
4 POLLUTION THREAT: 1980 to 1990

Prime oyster grounds are squeezed by salty water in the east and pollution from the built-up areas along the Mississippi River on the west. Oysters in the pollution impact area were affected by periodic closures, which typically ranged from a week to six months. In such periods, farmers still can harvest the oysters by letting them spend a few weeks in an unpolluted area.



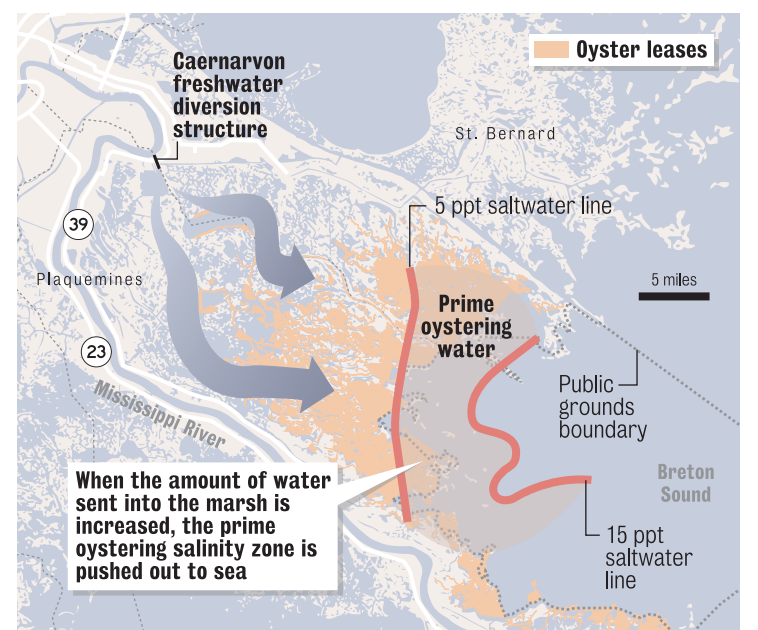
5 THE CAERNARVON FIX: 1991

Oyster harvesters initially were some of the most vocal proponents of the long-discussed Caernarvon Diversion, which opened in 1991. Its goal: Push fresh water into the basin to restore historic salinity rates. But no provisions were made to compensate oyster harvesters whose grounds would be over-freshened.



6 FAULTY PLUMBING: mid-1990s

Powerful landowners persuaded local officials to crank up the flow through Caernarvon to protect their properties from being swallowed by the Gulf. The move backfired. The flow was so strong it blew out the marsh and pushed the 5 ppt salinity line far to the east. State officials didn't correct the mistake until 1997, by which time thousands of additional acres were damaged.



7 \$2 BILLION DEBATE

Marine science clashed with local politics in St. Bernard and Plaquemines parish courtrooms. While Caernarvon revived the public oyster grounds and improved production on many private leases, the courts ruled that every oyster lease in a vast area of Breton Sound and Lake Borgne was permanently destroyed. Local courts pegged the damage at nearly \$2 billion, more than the value of the entire harvest of the past 100 years.

