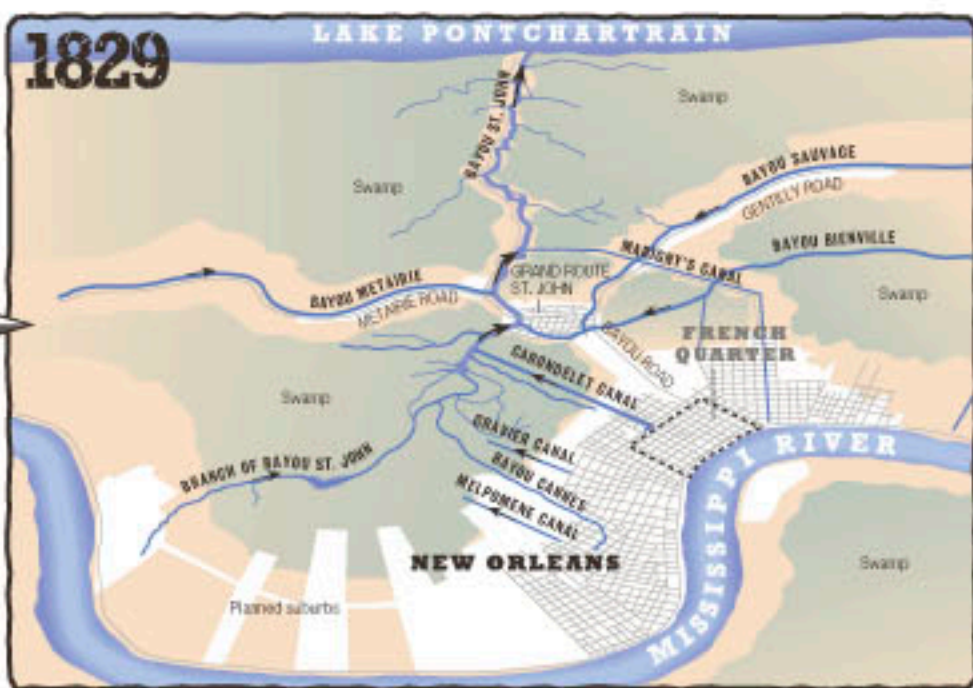


NEW ORLEANS CANALS

For centuries, most New Orleanians believed the drainage canals that cut through their neighborhoods were allies against Mother Nature. But when Hurricane Katrina hit, the allies proved to be turncoats.



THE FIRST PLAN - An early proposal shows every square in New Orleans bordered by drainage ditches, all tying into a larger canal that circles the settlement and redirects rainwater and sewage into swamps beyond the city.



A HAPHAZARD SYSTEM - As the city grows, so does its system of canals. As neighborhoods are carved out, residents band together to dig canals to ferry water away from their homes toward Lake Pontchartrain.

LEGEND

- Drainage flow
- Canals and waterways
- Pumping stations
- Roads
- Developed or subdivided land in New Orleans
- Cypress swamps and wetlands



MODERN DRAINAGE - At the turn of the century, the city embarks on a 15-year, \$27 million project that would create the world's most advanced drainage system. It would include 70 miles of canals and an innovative series of locally designed screw pumps. Elements of the system are still in use today.

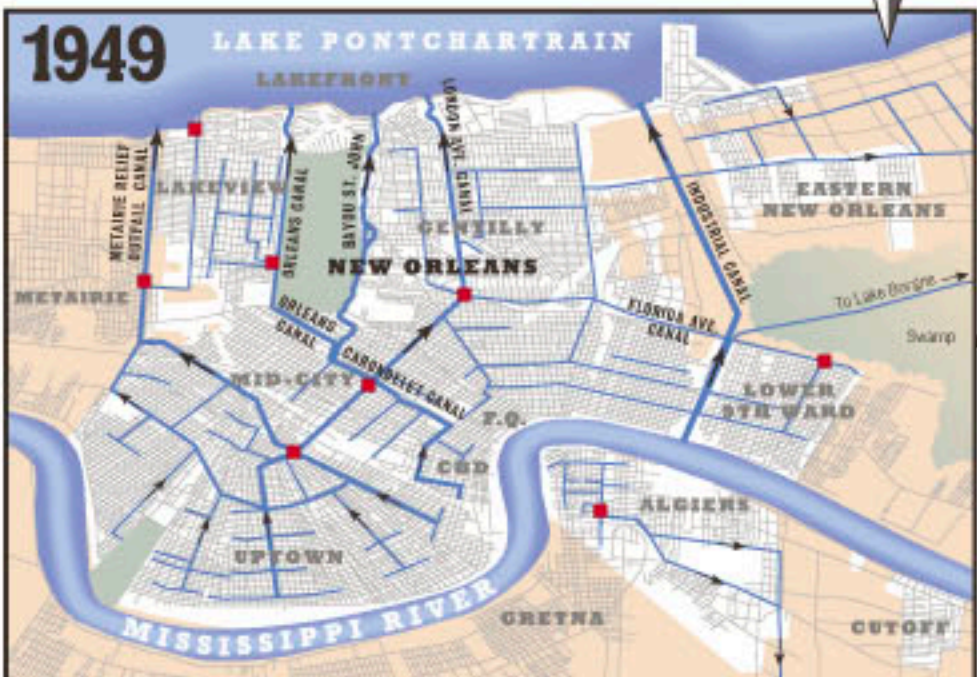


DRAINING THE SWAMP - City officials get serious about storm drainage. A series of smaller canals are created to feed into three major ones: London Avenue, Orleans Avenue and what would later be called 17th Street. One official urges that pumping stations be placed at the lake to prevent storm surge from flowing into the city. But no one listens. Meanwhile, city officials turn to the canals for a new mission. With the high ground all developed, they see the swamp between settled areas and Lake Pontchartrain as a new source of land.

CREDITS

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Sources:
 The Historic New Orleans Collection, "Charting Louisiana," "History of Regional Growth," "Time and Place in New Orleans," "Unnatural Metropolis"



GROWING WITH THE CITY - As New Orleans continues to drain outlying swamps, the canal system is expanded to serve new developments. By now it contains more than 150 miles of canals, most of which are covered. A series of hurricanes soon exposes a major weakness, as storm surge flows up the canals into the city. The federal government eventually assumes responsibility for ensuring the flooding doesn't recur.



TODAY'S SYSTEM - The modern system now includes 1,258 miles of drainage pipes, 170 miles of canals and more than 20 pumping stations. The three large outfall canals remain the major conduits for removing water. When the Army Corps of Engineers suggests placing floodgates at the end of those canals, the city — worried about the impact on the system's ability to pump out rainwater — objects. The city prevails, and a system of canal levees and floodwalls are built.



2005 LEVEE FOLLY - The decision to line the canals with levees and floodwalls instead of building an array of floodgates now appears foolhardy after the floodwalls failed during Hurricane Katrina. Two of the three outfall canals sustained major breaches that claimed scores of lives, destroyed many of the neighborhoods that had been carved out of swampland, and inundated much of the city for days and weeks.

Note: Flooded areas in light blue