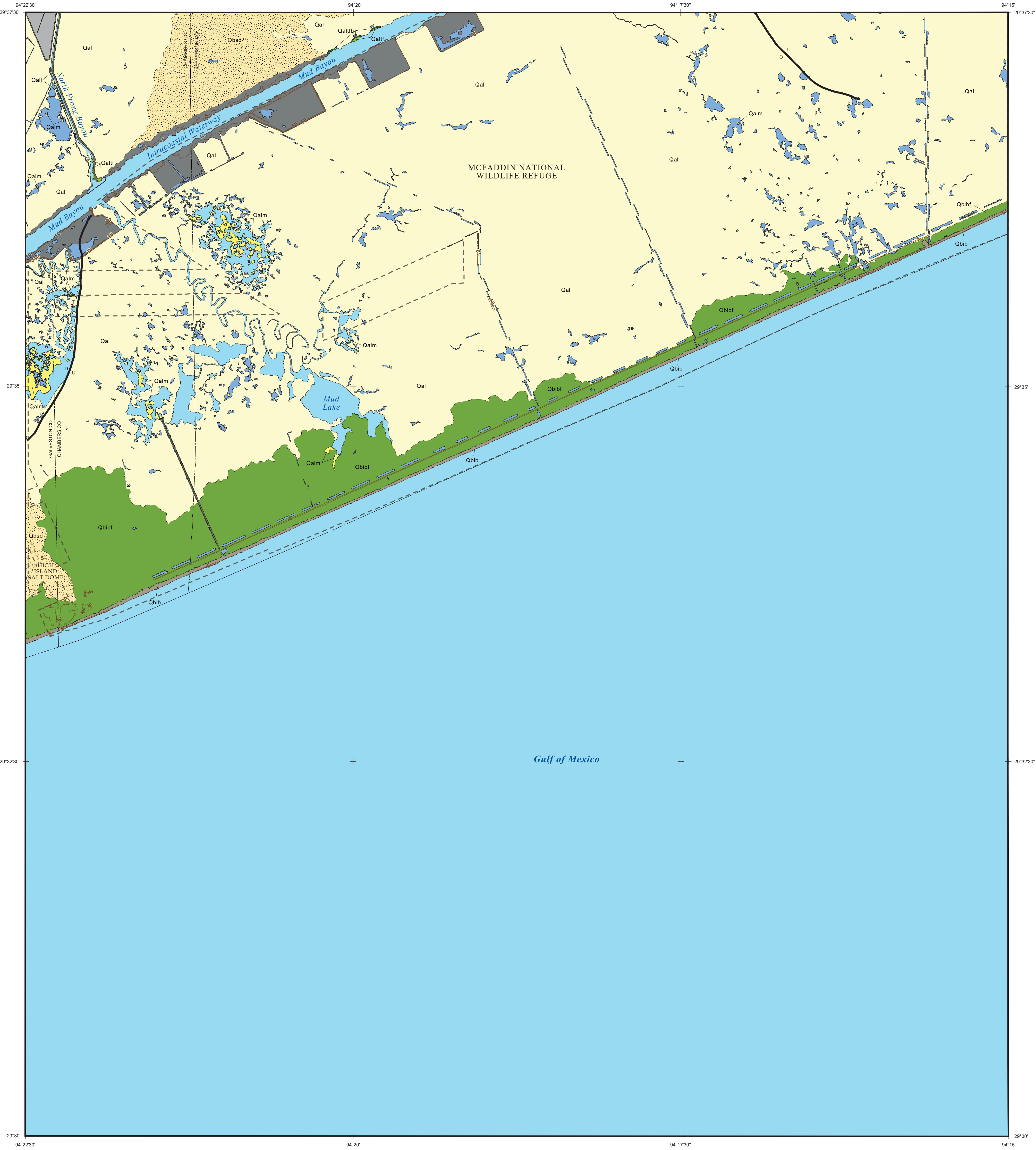
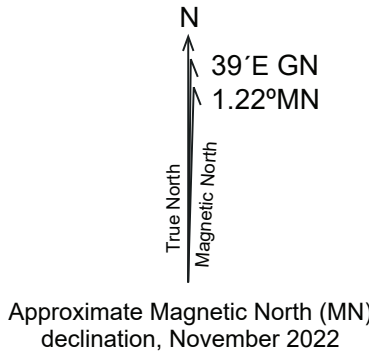


## GEOLOGIC MAP OF THE MUD LAKE QUADRANGLE, TEXAS GULF OF MEXICO COAST

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### Explanation

#### Holocene

- Qal**—Alluvium. Clay, silt, and sand. Includes point bar, floodplain, stream channel, backslope, coastal marsh, and mud flat.
- Qal**—Alluvium levee. Silt and sand. Natural levee along active stream channel.
- Qalm**—Marsh deposits in emergent areas. Sand and mud. Vegetated, low lying areas.
- Qaltf**—Tidal flat deposits in emergent areas. Sand and mud. Vegetated and barren undivided.
- Qaltfb**—Barren tidal flat deposits in emergent areas. Sand and mud.
- Qblbf**—Gulf margin barrier flat deposits. Sand.
- Qbib**—Gulf margin beach deposits, undivided. Sand.

#### Pleistocene

- Qbsd**—Beaumont Formation sandy facies. Sandy mud, silt, and minor sand. Deposited in fluvial-deltaic and distributary channel setting.

### Map Symbols

- Contact (distinct)
- Contact (gradational)
- Road
- Elevation (ft); contour interval = 5 ft
- Water; bay, tidal channel, or large stream
- SPW; selected ponded water or channel
- Pit
- Fault—showing sense of motion  
U = upthrown block; D = downthrown block
- County boundary
- Wildlife refuge
- Fill; land artificially elevated by fill material
- DMDA; dredged material disposal area
- Riprap breakwater

### Acknowledgments

Photography used in the study was 60-cm-resolution, natural color. National Agricultural Inventory Program digital imagery photographed in 2018 and 2020. Photography was obtained from Texas Natural Resources Information System (TNRIS). Photography was supplemented by a 50-cm-cell size digital elevation model (DEM) constructed from topographic data acquired during an airborne lidar survey flown by Fugro USA Land, Inc. in 2018 for the TNRIS, Texas Water Development Board (TWDB), and Houston-Galveston Area Council (H-GAC) as part of the Texas Strategic Mapping (StratMap) program. Tobin aerial photographs from the 1930s and 1950s were also used to assist in feature interpretation. Previous regional maps that cover this area include the 1:250,000-scale Geologic Atlas of Texas, Houston Sheet (Aronow and others, 1968; revised 1982), the 1:125,000-scale Environmental Geologic Atlas, Beaumont-Port Arthur Sheet (Fisher and others, 1973), and the 1:125,000-scale Distribution of Wetlands and Benthic Macroinvertebrates map (White and others, 1987).

Digital elevation contour files for generalized topography were adapted from USGS topographic data obtained from TNRIS. Digital files of Texas Department of Transportation roads were also obtained through TNRIS. Water bodies were mapped from aerial images and the lidar-derived DEM.

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| System     | Series      | Time (ka) | Map Units                                                                                                                                     |
|------------|-------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Quaternary | Holocene    | 12        | <div>Fluvial-Deltaic System</div> <div>Qal, Qal, Qalm, Qaltf, Qaltfb</div> <div>Strandplain and Estuarine System</div> <div>Qblbf, Qbib</div> |
|            | Pleistocene | 2600      | <div>Qbsd</div>                                                                                                                               |

