

2004-0299

INTRODUCED BY: 'RAM' RAMCHANDRAN, COUNCILMAN, DISTRICT III
ORDINANCE NO. 04-9-9

An ordinance to require the use of the North American Vertical Datum of 1988 (NAVD88) in place of the now defunct National Geodetic Vertical Datum of 1929 (NGVD29) in all surveys and drawings for elevation references and benchmarks in St. Charles Parish effective January 1, 2005. The transition period until the end of the year 2004 may utilize both datum, where possible, in all surveys and drawings.

- WHEREAS, the historical standard used in the United States of America for elevation reference was NGVD29; and,
- WHEREAS, NGVD29 has been replaced with NAVD88 as the official vertical datum for the United States of America by the National Geodetic Survey/National Oceanic and Atmospheric Administration (NGS/NOAA); and,
- WHEREAS, federal agencies, including the U.S. Army Corps of Engineers (USACOE), have changed their elevation reference to NAVD88 in Louisiana, including St. Charles Parish, for all federal projects, they still use Mean Low Gulf and The Low Water Reference Plane on their navigation projects as authorized by congress. These projects are controlled based on the vessel's keel clearances which are influenced by water levels and hence the projects are tied to water levels; and,
- WHEREAS, the COE has been referencing their projects to the CORS sites (NAVD88) for the past year and a half. This has enabled them to more accurately measure the relativity of one project to another. They also have plans to compute the relationship between Mean Low Water and NAVD88 at many of the gauges they have for their navigation projects. Their goal is to have every project referenced to NAVD88 as new work is required; and,
- WHEREAS, NGS/NOAA stated in a 2001 report to Congress that the vertical control reference system in Louisiana is obsolete and inaccurate; and,
- WHEREAS, NGS/NOAA and the Louisiana Spatial Reference Center at Louisiana State University (LSRC/LSU) has confirmed that benchmarks in St. Charles Parish have moved significantly so that they are no longer valid; and,
- WHEREAS, the citizens and the Parish Government in St. Charles Parish depend on valid benchmarks to facilitate surveying, construction, hurricane evacuation planning, flood zone delineation, as well as many other public safety and commerce concerns; and,
- WHEREAS, the St. Charles Parish Emergency Operations Center (EOC) Director, working with NGS/NOAA and LSRC/LSU, reported this year that Airline Highway is approximately three feet lower in St. Charles Parish than the previous datum had indicated; and,
- WHEREAS, the Federal Emergency Management Agency (FEMA) considers a change in elevation of 1/10 of a foot to delineate a difference in the definition of Flood Zone ratings; and,
- WHEREAS, NGS/NOAA and its in-state partner, LSRC/LSU, are now engaged in the recalibration of benchmarks throughout the state based on NAVD88; and,
- WHEREAS, NGS/NOAA has established a National Spatial Reference System fundamentally based on GPS technology; and,
- WHEREAS, LSRC/LSU has established a statewide positioning infrastructure of GPS satellite based stations called CORS (Continuously Operating Reference Station), including stations in St. Charles and neighboring parishes, which are a part of the National Spatial Reference System; and,
- WHEREAS, it is the plan of NGS/NOAA to utilize these CORS sites as the primary, official reference point for true elevations in Louisiana, including St. Charles Parish; and,
- WHEREAS, NGS/NOAA plans to use CORS sites as the basis for the recalibration of a portion of it's inventory of benchmarks throughout Louisiana and to maintain the NAVD 88 elevations of said benchmarks on a regular basis,

the elevations are NGS's responsibility, but maintenance of the marks is not. NGS should continue to periodically provide new reference elevations on a select group of benchmarks, but will not maintain the physical marks; and,

WHEREAS, LSRC/LSU and NGS/NOAA have established through analysis of historical observations that benchmarks in St. Charles Parish require a periodic recalibration approximately once every four years, the 4 year requirement is based on FEMA's precision for Flood Zone determination of 0.1 foot. The subsidence rate in that parish is such that they experience 0.1-foot difference in elevation every 4 years. Obviously, some parishes will be in need of re-survey sooner, many about the same, and some at greater intervals; and,

WHEREAS, failure to recalibrate every four years will render such benchmarks invalid, thus jeopardizing public safety and commerce in St. Charles Parish.

THE ST. CHARLES PARISH COUNCIL HEREBY ORDAINS:

SECTION I. Effective January 1, 2005 the North American Vertical Datum of 1988 (NAVD88) will be the sole vertical reference datum for all new surveys, drawings, title transfers, conveyances, insurance documents, flood insurance elevation certificates, and parish contracts.

SECTION II. During a Transition Time, being from the date this ordinance is passed until its effective date, all surveys, drawings, title transfers, conveyances, insurance documents and parish contracts shall have the option of being referenced to either datum, NAVD88 or NGVD29, or both.

SECTION III. On and after January 1, 2005, all new surveys, drawings, title transfers, conveyances, insurance documents, flood insurance elevation certificates, and parish contracts referencing elevation in the Parish of St. Charles shall be referenced to a current and valid NAVD88 benchmark. FEMA flood insurance rate maps, currently based on NGVD29, shall continue to be used for flood insurance elevation certificates, until updated by FEMA; however, the minimum base flood elevation requirement shall be computed based on NAVD88 data.

SECTION IV. The Department of Public Works shall maintain a list of current and valid NAVD88 benchmarks in and for the Parish of St. Charles. This list shall include sufficient information to identify, locate, and determine the last date of calibration/validation of benchmarks on the list.

SECTION V. "Current and valid NAVD88 benchmark" shall be defined as a benchmark whose elevation was published by NGS/NOAA and is no more than four years old.

SECTION VI. The Director of Emergency Preparedness in collaboration with the Public Works Director shall hold necessary education classes for public benefit.

NOW, THEREFORE BE IT ORDAINED, THAT WE, THE MEMBERS OF THE ST. CHARLES PARISH COUNCIL, shall forward a copy of this ordinance to all State and Federal agencies conducting business in St. Charles Parish AND request the State Legislative delegation to enact a similar requirement as a State law.

The foregoing ordinance having been submitted to a vote, the vote thereon was as follows:

YEAS: MARINO, FAUCHEUX, HILAIRE, FABRE, RAMCHANDRAN, WALLS,
DUHE, MINNICH
NAYS: NONE
ABSENT: BLACK

And the ordinance was declared adopted this 7th day of September, 2004, to become effective five (5) days after publication in the Official Journal.

North American Vertical Datum revised2

CHAIRMAN: Lance J. M...
SECRETARY: William J. ...
DLVD/PARISH PRESIDENT: September 8, 2004
APPROVED: DISAPPROVED:

PARISH PRESIDENT: Albert D. ...
RETD/SECRETARY: September 8, 2004
AT: 2:35 PM RECD BY BJS