



# Mississippi River Hydrodynamic and Delta Management Study

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## Data Management

**Task Manager:** Syed Khalil, Coastal Protection and Restoration Authority of Louisiana (CPRA)

**Participating Agencies:** Coastal Protection and Restoration Authority of Louisiana, US Geological Survey, USACE Engineer Research and Development Center, USACE New Orleans District, BEM Systems, and CB&I

**Purpose:** To provide data management and associated support services to the Mississippi River Hydrodynamic and Delta Management Study (MRHDMS) project team. This effort requires assessment, processing, compilation and archival of the large volumes of both legacy and newly-collected geoscientific data that will be used for modeling and other analysis of river processes. The majority of data types collected for the MRHDMS are managed within the Louisiana SAND Resources Database (LASARD) program – a GIS database managed by the State of Louisiana. Other data sources (e.g., Acoustic Doppler Current Profiler [ADCP], Conductivity/Temperature/Depth [CTD], and Laser In-Situ Scattering and Transmissiometry [LISST]) will be managed in more standard relational databases and made available through web visualization interfaces.

**Objectives:** The Data Management Team will process recently-collected and legacy data into standardized formats. All collected data sets will undergo quality control and quality assurance before archival. These data will be made available for use by the modeling teams, the state and federal partners, and the general public. The main data types that will be processed and archived include:

- Bathymetry (both single and multibeam)
- ADCP
- Sediment characterization
- Bed load and sediment flux
- Suspended load and grain size distribution
- Sand sheet thickness
- Water column turbidity
- Data to characterize bed morphological changes
- Salinity and temperature
- Other water quality parameters

### Challenges:

- Datasets can be very large, requiring large storage capacity and labor-intensive processing
- Tracking data use is necessary to notify end users of changes, corrections and additions to datasets

### Study Status:

- Existing legacy data have been identified and processed
- Recently collected multibeam, ADCP, and grain size datasets are being processed
- More than 100 data sets have been processed to date, with hundreds more scheduled for processing
- Secure file transfer capability and file naming conventions have been developed

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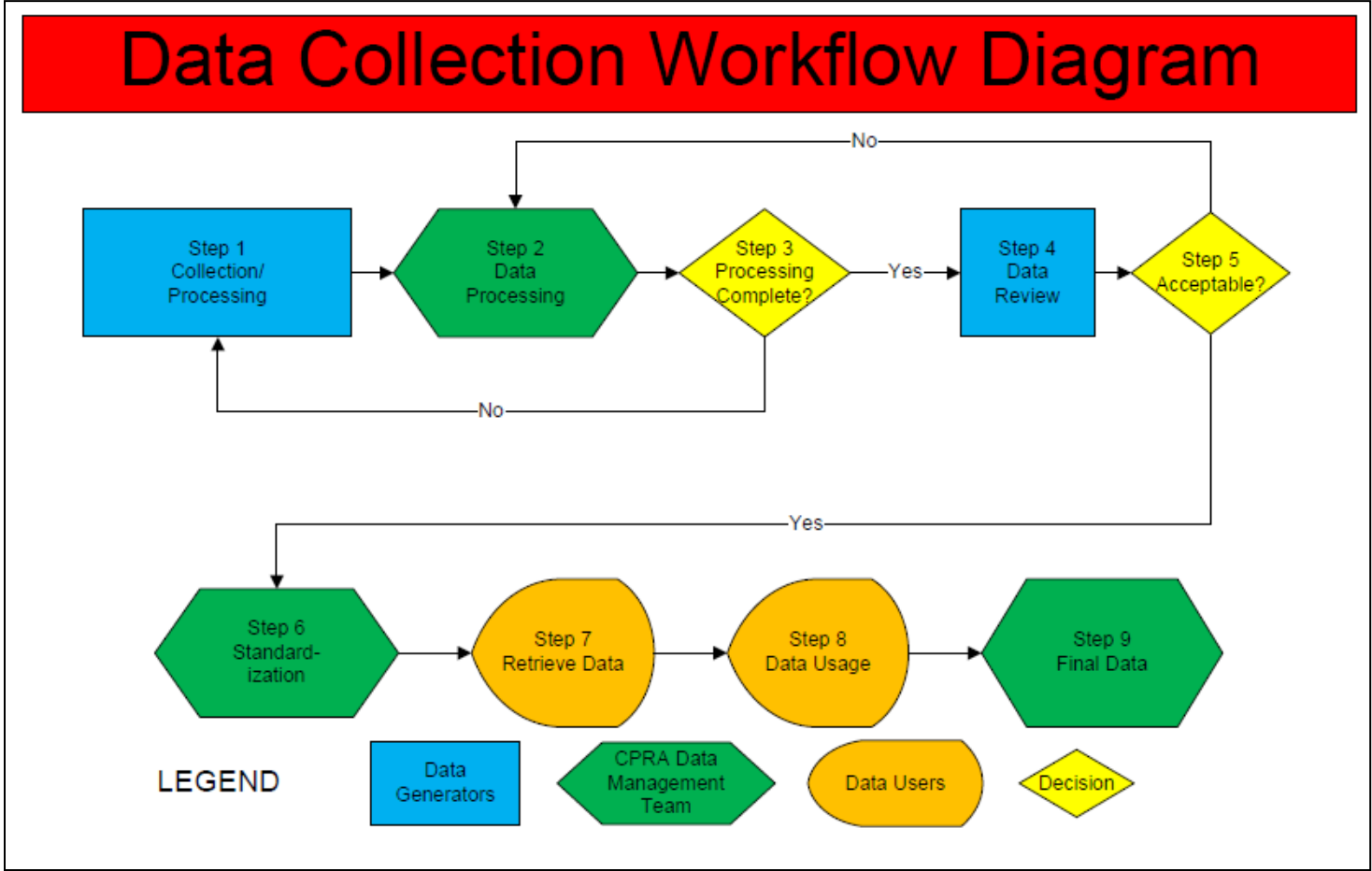


Figure 1: This workflow diagram applies to MultiBeam, ADCP, LISST, Conductivity/Temperature/Depth (CTD), and Bed Characterization data types (and other types to be added as required).

Anyone seeking additional information on the MRHDMS project can visit the LCA program website at [www.lca.gov](http://www.lca.gov), the New Orleans District LCA website at [www.mvn.usace.army.mil/Missions/Environmental/LouisianaCoastalArea.aspx](http://www.mvn.usace.army.mil/Missions/Environmental/LouisianaCoastalArea.aspx), or the CPRA website at <http://coastal.louisiana.gov/>.