



**US Army Corps
of Engineers®**

Engineer Research and
Development Center

Monitoring Completed Navigation Projects (MCNP) Program

Description

MCNP evaluates the performance of completed civil works navigation projects. Shallow- and deep-draft navigation projects located in rivers, reservoirs, lakes, estuaries, and the coastal zone may be considered for monitoring by the MCNP program. MCNP can monitor only completed projects operated and/or maintained by Corps Operation and Maintenance (O&M) funds. To be monitored by the program, projects must be directly related to navigation or be mitigation for navigation.

Issue

The program objective is to obtain information for verifying or improving navigation project performance. Monitoring is conducted (1) to determine if the project is functioning as designed, (2) to improve design procedures, (3) to improve construction methods, and (4) to improve operations and maintenance techniques. Monitoring may be conducted either as a comprehensive detailed survey to verify post-construction conditions on a onetime basis, or as a continuous (repetitive) collection of prototype data over an extended period.



Some navigation structures contain innovative components such as concrete armoring, porous caps, steep slopes, marine mattresses, berms, or unique lock and dam features. There exists no long-term detailed standardized monitoring of this infrastructure, and no formalized program for capturing and disseminating lessons learned. It is crucial that long-term performance of coastal and inland navigation infrastructure be documented and disseminated in a standardized manner. The approach is to gather, analyze, and archive detailed structural condition, performance, and response data on a relatively small number of structures that are characteristic of a larger class of structures, or that have some unique or innovative characteristics. The data include lidar or photogrammetric surveys, hydrographic surveys, walking surveys, and damage surveys that are more comprehensive than typical field inspections.

Products

Both site-specific and generic lessons learned which can be extrapolated on a regional or national basis are provided to field offices in the form of Technical Reports and Engineering Technical Notes. Data are compared to historical data and to standard design methods in order to improve designs. Data are stored in GIS layers and delivered to the field through reports, archived data sets, GIS, and the Google Earth Enterprise Coastal Inventory Database (ECID).

Benefits

Data are available for updating Corps Engineering Manuals and other guidance documents.

Point of Contact

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