



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CECW-CE (1110)

MAY 1 2006

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Levee Inventory

1. The purpose of the memorandum is to provide initial guidance concerning the development of a national levee database and the initial collection of levee project data through the use of a survey process. Currently, there is no existing national database or single source of information that provides project information on flood damage reduction structures for use in assessing or managing the condition, location, level of protection or maintenance activities. While levee databases exist in some USACE District Offices, there is no standard database structure across the Corps. This initial effort to establish a national database will be an inventory of all levees currently in the Corps inventory, to include all Mississippi River and Tributaries (MR&T) projects, all federal projects covered by the Inspection of Completed Work (ICW) program, and all non-federal projects within the Rehabilitation Inspection Program (RIP) using an online survey tool. This work is authorized and appropriated by Congress in FY06 through the Flood Control and Coastal Emergencies (FCCE) funding and subsequent funding is anticipated in FY07.

2. The purpose of this initial inventory survey is to initiate the process of consolidating levee information across the Corps and get an indication of the condition of the Corps levee structures. The levee inventory will be developed by each District through an online survey and this inventory will be used to initialize the National Levee Database. A secondary purpose will be to help develop Pilot Projects for risk assessments, and develop a program management plan for developing a georeferenced national levee database. The information in the initial National Levee Database will be refined over time through pilot projects for risk assessment and the FCCE program.

3. Enclosure 1 is the list of questions that each District will be required to answer using an online survey tool. As part of the survey, districts will need to identify an approximate center of each levee segment. In order to answer the online survey, Districts will be required to incorporate expertise from operations, engineering and geospatial areas; however, only one consolidated answer per District will be required.

4. Enclosure 2 contains a list of district & division contacts that have been identified to coordinate levee data collection within their district. Please review this list and provide necessary corrections to Mr. Tim Pangburn NLT 1 May 2006 at ERDC CRREL (603 646-4296). A small amount of funding will be provided to District offices to offset the costs of completing the online survey data collection. Funding will be provided based on the number of levee projects per District and requests will be coordinated through Tim Pangburn.

CECW-CE
SUBJECT: Levee Inventory

5. The online survey will be available in mid May for 6 weeks and the link will be sent to the survey POC indicated in Enclosure 2. Point of contact for this online survey is Tim Pangburn (603) 646-4296, Nancy Blyler, (202)-761-7755, Jeff Jensen (202) 761-7687 or Steve Durrett (202) 761-5346.

FOR THE COMMANDER:

Encls



DON T. RILEY
Major General, USA
Director of Civil Works

DISTRIBUTION:

COMMANDER,
US ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER
US ARMY ENGINEER DIVISION, GULF REGION
US ARMY ENGINEER DIVISION, MISSISSIPPI VALLEY
US ARMY ENGINEER DIVISION, NORTH ATLANTIC
US ARMY ENGINEER DIVISION, NORTHWESTERN
US ARMY ENGINEER DIVISION, PACIFIC OCEAN
US ARMY ENGINEER DIVISION, SOUTH ATLANTIC
US ARMY ENGINEER DIVISION, SOUTH PACIFIC
US ARMY ENGINEER DIVISION, SOUTHWESTERN
DEPUTY COMMANDER,
US ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER, GREAT LAKES
REGION
US ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER, OHIO RIVER
REGION
US ARMY ENGINEER DIVISION, NORTHWESTERN, COLUMBIA RIVER REGION
US ARMY ENGINEER DIVISION, NORTHWESTERN, MISSOURI RIVER REGION
COMMANDER,
US ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
US ARMY ENGINEER DISTRICT, FORT WORTH
US ARMY ENGINEER DISTRICT, HONOLULU
US ARMY ENGINEER DISTRICT, LITTLE ROCK
US ARMY ENGINEER DISTRICT, LOUISVILLE
US ARMY ENGINEER DISTRICT, MOBILE
US ARMY ENGINEER DISTRICT, NORFOLK
US ARMY ENGINEER DISTRICT, OMAHA
US ARMY ENGINEER DISTRICT, SACRAMENTO

CECW-CE

SUBJECT: Levee Inventory

DISTRIBUTION,

COMMANDERS (CONT):

US ARMY ENGINEER DISTRICT, SAVANNAH
US ARMY ENGINEER DISTRICT, TULSA
US ARMY TRANSATLANTIC PROGRAMS CENTER
US ARMY ENGINEER DISTRICT, AFGHANISTAN
US ARMY ENGINEER DISTRICT, ALASKA
US ARMY ENGINEER DISTRICT, ALBUQUERQUE
US ARMY ENGINEER DISTRICT, BALTIMORE
US ARMY ENGINEER DISTRICT, BUFFALO
US ARMY ENGINEER DISTRICT, CHICAGO
US ARMY ENGINEER DISTRICT, CHARLESTON
US ARMY ENGINEER DISTRICT, DETROIT
US ARMY ENGINEER DISTRICT, FAR EAST
US ARMY ENGINEER DISTRICT, GALVESTON
US ARMY ENGINEER DISTRICT, GULF REGION, CENTRAL
US ARMY ENGINEER DISTRICT, GULF REGION, NORTH
US ARMY ENGINEER DISTRICT, GULF REGION, SOUTH
US ARMY ENGINEER DISTRICT, HUNTINGTON
US ARMY ENGINEER DISTRICT, JACKSONVILLE
US ARMY ENGINEER DISTRICT, JAPAN
US ARMY ENGINEER DISTRICT, KANSAS CITY
US ARMY ENGINEER DISTRICT, LOS ANGELES
US ARMY ENGINEER DISTRICT, MEMPHIS
US ARMY ENGINEER DISTRICT, NASHVILLE
US ARMY ENGINEER DISTRICT, NEW ENGLAND
US ARMY ENGINEER DISTRICT, NEW ORLEANS
US ARMY ENGINEER DISTRICT, NEW YORK
US ARMY ENGINEER DISTRICT, PHILADELPHIA
US ARMY ENGINEER DISTRICT, PITTSBURGH
US ARMY ENGINEER DISTRICT, PORTLAND
US ARMY ENGINEER DISTRICT, ROCK ISLAND
US ARMY ENGINEER DISTRICT, SAN FRANCISCO
US ARMY ENGINEER DISTRICT, SEATTLE
US ARMY ENGINEER DISTRICT, ST. LOUIS
US ARMY ENGINEER DISTRICT, ST. PAUL
US ARMY ENGINEER DISTRICT, VICKSBURG
US ARMY ENGINEER DISTRICT, WALLA WALLA
US ARMY ENGINEER DISTRICT, WILMINGTON
US ARMY TRANSATLANTIC PROGRAMS CENTER, EUROPE

DRAFT

Levee Survey Questions

Part A – General Administrative Information

1) Identify a District POC who is responsible for completing the levee survey. While it will take a team of folks (Engineering, Operations, Planning, and GIS) to accurately complete the survey, please identify the lead person who can answer questions related to the survey and ultimately work with the database Project Delivery Team (PDT) on getting District information into the National Levee Database.

Name, District, Org Code, Phone Number, and Email Address

2) What software program are you currently using to maintain administrative levee data?

- Spreadsheet
- Word Processor
- Database
- Paper
- Don't maintain levee data

Part B – Identify all MR&T, Federally authorized, sponsored, maintained, and non-Federal flood protection projects in both an active and inactive status in the RIP program within your District area of responsibility. For the purposes of this survey, a flood protection project is defined as a project protecting a defined area consisting of levees or floodwalls or a combination of both that provide a contiguous segment of protection that is operated and maintained by a single levee sponsor. While a project can have multiple sponsors, we need to delineate segments of the levee project by single sponsors. Therefore for the purposes of the survey you will provide information for each levee segment based on the segment's sponsor or maintenance district with O&M responsibility for that segment of the levee.

3) What is the Project Name?

4) What is the CWIS Number?

5) What is the Project Type?

- Federally constructed and Federally operated
- Federally constructed and sponsor operated
- Non-Federally constructed, operated, and included in the RIP Program

6) Are there multiple sponsors for this project?

Yes - If yes, please complete the following questions for each project levee sponsored segment.

DRAFT

No - If no, please complete the following questions by treating the entire project as one segment.

7) Who is the local sponsor for project segment?

8) What is the Name of the project segment?

9) What is the Approximate length of local protection in Miles of the project segment?

10) For each structural component in the project segment, please provide the approximate total number of components or length in miles:

- _____ Pumping Stations (number)
- _____ Closure Structures (number)
- _____ Relief Wells (number)
- _____ Earthen Levees (miles)
- _____ I-Walls (miles)
- _____ T-Walls (miles)
- _____ L-Walls (miles)
- _____ Other type of Walls (miles)
- _____ Stability Berms (miles)

11) What State is the project segment in?

If the project segment is in multiple states – please designate the state containing the largest portion of the project segment.

12) What County is the project segment in?

If in multiple counties – please designate the county containing the largest portion of the project segment.

13) What City is protected by the project segment?

If multiple cities – please designate the city with the largest protected population.

14) What River is the project segment on?

15) What is the predominant mapping program format used to maintain the project segment?

- AutoCAD
- MicroStation
- ESRI Shape File
- ESRI Geodatabase
- Hardcopy
- No project graphic data maintained

DRAFT

16) If GIS is used, is the project segment data SDSFIE compliant?

- Yes
- No

17) If GIS is used, does the project segment have an associated Metadata file?

- Yes
- No

18) What was the predominant method for capturing the project segment's geographic coordinates?

- Do not exist
- Digitized off of quad sheets or aerial photography
- Using photogrammetric techniques
- Traditional survey
- GPS survey

19) For Federal projects, what was the project segment's construction completion date?

(This will only be answered for levees that fall into the "Federally constructed and Federally operated" or the "Federally constructed and sponsor operated" categories).

DD/MM/YYYY

20) For non-Federal projects, what was the project segment's Initial Eligibility Inspection (IEI) date?

(This will only be answered for levees that fall into the "Non-Federally constructed, operated, and included in the RIP Program" category).

DD/MM/YYYY

21) When was the date of the most recent periodic (CEI or ICW) inspection of the project segment completed?

DD/MM/YYYY

22) What was the last CEI/ICW project segment inspection rating?

- Acceptable (CEI)
- Minimally Acceptable (CEI)
- Unacceptable (CEI)
- Excellent (ICW)
- Very Good (ICW)

DRAFT

DRAFT

- Good (ICW)
- Fair (ICW)
- Poor (ICW)

23) Since the date of the last CEI/ICW inspection, are you aware of any condition change to the project segment?

- Yes - if yes please complete question 24.
- No

24) If yes - was the project segment condition change due to one of the following processes?

- Outlet Works/Pump Stations (Problems with flap gates, gravity pipes through levees, pumps, or pump stations)
- Settlement/Subsidence (Vertical movement of the levee or walls)
- Erosion (From overtopping; Wave or river currents have damaged the protection system)
- Seepage (evidence of boils, or seepage flows along the landside of the levee during recent flood events)
- Slumping (Slope movement that makes the levee or floodwall structurally inadequate to provide protection)
- Breach (A failure in part of the protection system)

25) Is the project segment protecting agriculture or urban populated area?

- Agriculture
- Urban
- Both

26) If urban area or both, please estimate the protected population number?

- Less than 10,000
- 10,000 - 49,999
- 50,000 - 99,999
- 100,000 - 499,999
- 500,000 - 1,000,000
- Greater than 1,000,000

27) What is the estimated total area in square miles protected by the project segment?

- Less than 5 square miles
- 5 - 24 square miles
- 25 - 49 square miles
- 50 - 74 square miles
- 75 - 100 square miles
- Greater than 100 square miles

DRAFT

DRAFT

28) What is the authorized or designed level of protection for the project segment?

- 0 - 24 year flood
- 25 - 49 year flood
- 50 - 99 year flood
- 100 - 500 year flood
- Greater than 500 year flood

29) Based on existing available data and information, is the project segment currently providing the authorized constructed level protection?

- Yes
- No
- Unknown

30) What is the approximate design elevation of the top of the project segment in feet (NAVD 88)?

31) What is the difference between the authorized construction elevation and the actual elevation of the project segment?

- Less than 1 foot
- Between 1 - 3 feet
- Greater than 3 feet
- No difference
- Unknown

32) What is the approximate elevation in feet of the historical flood of Record (NAVD88)?

33) Does the current effective FIRM show the project segment as providing flood protection? (you may need to contact local FEMA region office for this information).

- Yes
- No

34) Based on existing available data and information, what is the status of the project segment's certification status (FEMA CFR 44 Section 65-10)?

- Certified to FEMA 100 year level of protection
- Believed to be certifiable to FEMA 100 year level of protection
- Not certifiable to FEMA 100 year level of protection
- Questionable if certifiable to FEMA 100 year level of protection
- Require further study (No data available)
- < FEMA 100 year level protection

DRAFT

35) Has the project segment received any PL 84-99 rehabilitation repair work? If so please state when each repair was made and what was the total approximate cost of each one?

DD/MM/YYYY

- Less than \$100,000
- \$100,000 to \$499,999
- \$500,000, to \$1,000,000
- Greater than \$1,000,000

36) Is the project segment currently in an active or an inactive status in the RIP?

- Active
- Inactive

37) Please map the coordinates of the approximate center of the project segment using the map tool below.

Part C- Identify any other flood protection projects not included in part B but fall within your District's area of responsibility. It is understood that it will be difficult to capture information on levees that are not Corps levees; however, if you are aware of levees within your District, please identify them here.

38) What is the Name of the project?

39) What State is the project in?

If the project is in multiple states – please designate the state containing the largest portion of the project.

40) What is the County the project in?

If in multiple counties – please designate the county containing the largest portion of the project.

41) What City is protected by the project?

If multiple cities – please designate the city with the largest protected population.

42) What River is the project on?

43) Is the project protecting agriculture or urban populated area?

- Agriculture
- Urban

DRAFT

DRAFT

- Both

44) If urban area or both, please estimate the protected population number?

- Less than 10,000
- 10,000 – 49,999
- 50,000 – 99,999
- 100,000- 499,999
- 500,000 – 1,000,000
- Greater than 1,000,000

45) Please map the coordinates of approximate center of the project using the map tool below.

National Levee Safety POC
4-18-06

| Division | Division POC | Districts | Levee Inventory POC | Levee Assessments POC |
|----------|--------------------------------------|---------------|------------------------|-----------------------|
| LRD | Rob Taylor | Buffalo | Carm Marranca | Carm Marranca |
| | | Chicago | Rick Ackerson | John Fornek |
| | | Detroit | Ken Drum | Tina Kowitz |
| | | Huntington | Rodney Cremeans | Rodney Cremeans |
| | | Louisville | Dan Frank | Chris Neutz |
| | | Nashville | Kathy Grimes | Gordon McClellan |
| | | Pittsburg | TJ Fichera | Dave Carlson |
| MVD | Pat Tucker | Memphis | Ken Bright | Ronald Smith |
| | | New Orleans | Jerry Colletti | Pete Cali |
| | | Rock Island | Rodney Delp | Rodney Delp |
| | | St. Louis | Jim Kuehnle | Dennis Stephens |
| | | St. Paul | Dana Werner | Dave Rydeen |
| | | Vicksburg | Jim Spencer/Jack Smith | Ron Goldman |
| NAD | Dan Rodriguez | Baltimore | Ken Downey | Justin Callahan |
| | | New England | James Law | Anthony Firicano |
| | | Norfolk | Cheryle Fromme | Cheryle Fromme |
| | | New York | Marty Goff | Ben Baker |
| | | Philadelphia | Bruce Rogers | Bruce Rogers |
| NWD | Bruce McCracken Alt: Dale Munger | Kansas City | Jud Kneuvean | Scott Loehr |
| | | Omaha | Janelle Mavis | Randy Behm |
| | | Portland | Jerry Christensen | Jerry Christensen |
| | | Seattle | Charles Ifft | Charles Ifft |
| | | Walla Walla | Herb Bessey | Steven Fink |
| POD | Richard Abe | Alaska | David Spence | Harlan Legare |
| | | Hawaii | James Bersson | James Bersson |
| SAD | Tracy Hendren Alt: Bob Fulton | Charleston | Doug Holmes | Don Smith |
| | | Jacksonville | Earl Wagner | Brent Trauger |
| | | Mobile | Doug McArthur | Davood Tashbin |
| | | Savannah | Stan Clark | Don Smith |
| | | Wilmington | Bob Sattin | Don Smith |
| SPD | Tony Mei | Albuquerque | Matt Bourgeois | Matt Bourgeois |
| | | Los Angles | Ted Masigat | Ted Masigat |
| | | Sacramento | Michael O'Neill | Michael Ramsbotham |
| | | San Francisco | Sing Wan | Bill Firth |
| SWD | Tommy Schmidt Alt: Michael Jordan | Fort Worth | Terry Bachim | Anita Branch |
| | | Galveston | Willis Walker | Willis Walker |
| | | Little Rock | Charles Tobin | Elmo Webb |
| | | Tulsa | Jim Leach | John Wagner |

Levee Inventory was to be someone typically associated with the ICW program, Operations.

Levee Assessments was to be someone typically associated with Engineering.