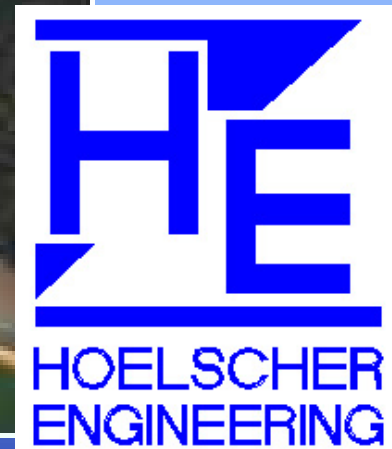


REAL LIFE EXPERIENCES PURSUING LEVEE RE-ACCREDITATION



Bryan T. Martindale, P.E., CFM
Gary R. Hoelscher, P.E., CFM



REAL LIFE EXPERIENCES

INTRODUCTION & COMMENTS

- **Current Hoelscher Projects**
 - 2 as Certifying Engineer
 - 1 as Subconsultant to the Certifying Engineer
 - 1 as Interior Drainage Analysis Engineer
 - 1 as Consultant to a Major Levee Stakeholder
- **Disclaimers**
 - 4 PAL projects
 - 1 non-PAL project
 - No information included from this project for contractual reasons
 - Specific names, locations, projects and clients not provided



REAL LIFE EXPERIENCES

- **OVERVIEW OF LEVEE SYSTEMS**
- **PAL ELIGIBILITY.....OR NOT**
- **LEVEE COMPLIANCE STANDARDS**
- **RE-ACCREDITATION COSTS**
- **FEDERAL LEVEE POLICY CHALLENGES**
- **IDENTIFIED CONCERNS**
- **THOUGHTS AND SUGGESTIONS**



OVERVIEW OF LEVEE EXPERIENCES

- **LEVEE SYSTEMS IN GENERAL TERMS**
- **RIVERS**
- **OWNERS & CLIENTS**
- **AREAS PROTECTED**

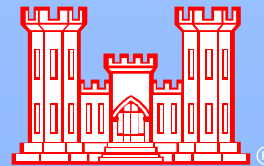


PAL ELIGIBLE....OR NOT

- **PALs AND 44 CFR 65.10**
 - Definitions via PM 43
 - USACE levee?
 - “Provide BFE protection”
 - Designation by Guidelines
 - Levee scenario B



- **COLLABORATION WITH USACE**
 - Acceptable vs. Unacceptable !!



- **PAL PROCESS “ASSUMPTION”**
 - Compilation of design & O&M data
 - Validation of available data

- **PAL COMPLIANCE**
 - Standards & Timetable....not so simple!
 - Certification package via PAL process
 - “still requires detailed evaluation & analyses”



PAL ELIGIBLE....OR NOT

LEEVE SCENARIOS SUMMARY

COE levees:

Built by COE

Authorized by Congress

Built by other but incorporated into COE program by act of Congress

Federal project O&M'd by COE or turned over to local for O&M

Non-federal project included in RIP

SCENARIO A *NON COE levee but are shown to provide BF protection*

A1- if 65.10 is believed to be met

A2- if 65.10 is believed to be met EXCEPT for maintenance deficiency

SCENARIO B *COE levee eligible for PAL*

- FIRM shows BF protection
- No other info indicates BF protection not provided
- Inspection rating is "acceptable"

SCENARIO C *COE levee but with known deficiencies but are shown to provide BF protection*

C1- "MAJOR PROBLEMS" inspection rating as "fair, poor or unacceptable"
RIP status set to "inactive"
No 1-yr correction period provided

C2- "MINOR PROBLEMS" inspection rating as "fair, poor or unacceptable"
RIP status as "active" prior to 9/30/05
COE offers one time 1-yr correction period

SCENARIO D *COE levee but not providing BF protection*

SCENARIO E *COE levee shown to provide BF protection but actually does not*

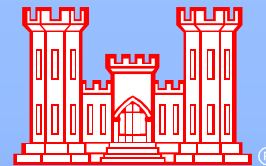
- Shown providing protection but COE or FEMA data indicates otherwise
- Inspection is not "fair, poor or unacceptable" but levee failed or overtopping < 100 yr.

PAL ELIGIBLE....OR NOT

- **PALs AND 44 CFR 65.10**
 - Definitions via PM 43
 - USACE levee?
 - Provide BFE protection
 - Designation by Guidelines
 - Levee scenario B



- **COLLABORATION WITH USACE**
 - Acceptable vs. Unacceptable !!

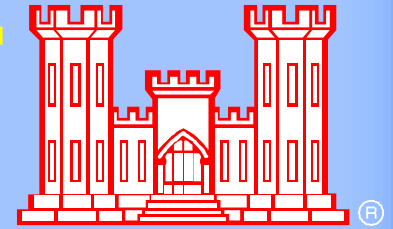


- **PAL PROCESS "ASSUMPTION"**
 - Compilation of design & O&M data
 - Validation of available data

- **PAL COMPLIANCE RAMIFICATIONS**
 - Standards & Timetable....not so simple!
 - "Certification" via PAL process..... still requires detailed evaluation & analyses



LEVEE COMPLIANCE “STANDARDS”



- **USACE STANDARDS “GOLD”**
 - EM1110-2-1913... “LEVEE DESIGN” APRIL 2000
 - ETL 1110-2-569... “underseepage guidance” MAY 2005
- **STANDARDS**
 - POLICY “UPGRADES”
 - TIMING VS. PAL PROCESS PERIOD
 - “CERTIFICATION” → “NFIP LEVEE SYSTEM EVALUATION”
 - ETL 5702007 → EC 6067....2010
 - FLOOD FIGHTING VS. O&M
- **CHANGING “STANDARDS”**
 - INJECTED UNCERTAINTY FOR PRIVATE “CERTIFICATION”

RE-ACCREDITATION COSTS

- **BIFURCATION**
 - PHASE I: UPFRONT COMPILATION & ENGINEERING
 - PHASE II: CONSTRUCTION ?...COULD BE BIG \$\$\$
- **IMPACTS OF COSTS**
 - OWNER CAPABILITIES EXTREMELY LIMITED
 - REVENUE SOURCES BASED ON O&M ONLY
- **FUNDING THE COSTS**
 - PROPERTY TAX RATES
 - NEW TAXING ENTITIES
 - STAKE HOLDERS
- **PHASE I COSTS**
 - YEARS OF NORMAL REVENUE



FEDERAL LEVEE POLICY CHALLENGES

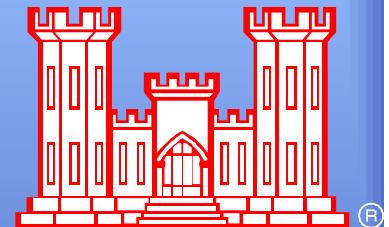


- **FEMA**

- PRECLUDED CERTIFIED USACE DATA
- “OVER CERTIFICATION” DILEMMA

- **USACE**

- GENERALLY
 - NO NEW CERTIFICATION
 - NO DATA CERTIFICATION
 - ONLY LEVEES OWNED AND OPERATED



IDENTIFIED CONCERNS

- **USACE VS. FEMA PROCESSES**
 - *THE GOOD, THE BAD AND THE UGLY*
 - *84-99 INSPECTIONS AND PAL LETTERS*
- **ORIGINAL LEVEE DESIGN STANDARDS**
 - *AG VS. URBAN FACTORS OF SAFETY*
- **REMAPPING & INSURANCE**
 - *LEGISLATION5 YR DELAY FOR RATES*
 - *INSURANCE VS. MAPPING IMPACTS*



IDENTIFIED CONCERNS

- **LIABILITY**

- *OLD DATA MUST BE “RECREATED”*
- *INCREASES TO COSTS AND SCHEDULE*
- *CONTINUED RISK FOR ENGINEER*



- **COSTS**

- *MUCH HIGHER THAN ANTICIPATED*
- *LIABILITY ISSUES*



- **PAL COMPLIANCE PERIOD**

- *ACCREDITATION IS A “FROM SCRATCH” PROCESS*



THOUGHTS AND SUGGESTIONS

- **OUTREACH AND EDUCATION TO OWNERS AND ENGINEERS**

- *PROCEDURES CAN BE AMBIGUOUS*
- *OWNERS HAVE RELIED ON USACE ...mixed signals*
- *CONFUSION WITH PL84-99 AND 44 CFR 65.10*
 - *Especially the costs*



- **POLICY CHANGES**

- *COMMUNICATION...ROUTINE UPDATES*



- **PAL COMPLIANCE PERIOD**

- *NOT JUST A PAPER CHASE*



THOUGHTS AND SUGGESTIONS

- **FUNDING EVALUATION**

- *LEVEE OWNERS NEED MORE TIME*

- *Phase I vs. Phase II costs*

- *IDENTIFY OVERALL COSTS*

- *Including construction*



- **FINANCIAL RESOURCES**

- *OWNERS HAVE LIMITED FUNDS*

- *OWNERS CAN'T AFFORD IMPROVEMENTS*

- *STATE OR FEDERAL ASSISTANCE ?*



REAL LIFE EXPERIENCES PURSUING LEVEE RE-ACCREDITATION



QUESTIONS ?

