

Presentation to the

***MR&T Levee Partnering
Meeting***

by

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Authority and Background on Vegetation Issues



- **Fld Ctrl Act 1928: USACE has continuing authority beyond project ROW to ensure flood control purposes are not impaired**
- **Section 202(g) of WRDA 96 required the USACE to undertake a comprehensive review of its levee vegetation policy.**
 - **Consider the varied interests**
 - **Preserve, protect, and enhance natural resources**
 - **Protect the rights of Native Americans pursuant to treaty and statute**



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Interim Guidance



- **Memo June 2007, Dir Civil Works**
- **ER 500-1-1**
- **EP 500-1-1**



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Memo, June 2007



- **Interim guidance for Veg. Deficiencies for unacceptable ratings**
- **Sod maintained 2-12 inches in height**
- **Levee or wall section remain free of trees**
 - **Berms, blankets, relief wells, drainage ditches**
 - **O&M Manual must include annual program to control vegetation growth and animal burrows**
- **Veg Free Zone**
 - **15 feet from levee toe**
 - **Or to existing project easement limits**



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Memo, June 2007 cont'd



- **Clearing and grubbing non compliance trees**
 - **< 4-inch: Cut flush and treat stump to retard decay**
 - **> 4-inch: Remove root ball, backfill with compacted impervious fill**
 - **Animal impacts: follow FEMA 437**



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ER 500-1-1, Chapter 5-22



Regional Variances on Vegetation

- All Active Federal and non Fed levees, except for MR&T Levees
- Regional Variances granted only if:
 - Safety, structural integrity, and functionality of the levee are retained
 - Accessibility for inspection and flood fighting purposes is retained
 - Level of protection remains at level necessary for levee certification under NFIP Program
 - Level of protection remains permissible for PL 84-99 acceptability (ag. levee 5-yr, 10-yr urban)



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EP 500-1-1, Sept 2001

Appendix E



- **Regional Variance Agreements**
- **Requesting process**
- **USACE District Approval**
- **Funding**



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ETL 1110-2-301

Guidelines for Landscape Planting and Vegetation Mgmt

- Draft completed
- Under Review



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Paterno Case



- **1986 Sacramento River Flood**
- **50,000 people evacuated**
- **9,000 families left homeless**
- **\$532 million in damages**
- **2 decades of litigation**
- **Landmark court decision in 2003**
- **Public entity takes over levee built by someone else they assume liability**



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Probabilistic Approach

“Risk”



- **Risk = Probability X Consequences**

- **Probability**
 - **H&H current – proper levee height**
 - **Adequate field investigation and proper Geotech Analyses for Stability and Seepage**
 - **Constructed according to specifications**
 - **Properly maintained**
 - **Seismic issues – EQ during high water**
 - **Encroachments: pools, ditches, drilling, trees**



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Levee Near Larned, KS



One Team: Relevant, Ready, Responsive, Reliable



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Wall near Larned, Kansas



One Team: Relevant, Ready, Responsive, Reliable









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Closing Thoughts



- **As trees grow so do: Env. Benefits, habitat, beauty, shade, overall desire to keep trees AS DO eng. concerns for negative impacts**
- **Safer to remove trees while they are healthy**
- **Caution when removing roots near floodwall**
- **Few levees old enough to go thru the full effect of trees fully maturing and dying**
- **Levees are permanent – trees are not**



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Questions / Comments

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