

# **U.S. Army Corps of Engineers**

## **San Francisco District**

### **4th Annual Levee Owners Workshop**

**MAJ Thomas V. Giannini, U.S. Army Engineer**  
Construction Project Engineer  
San Francisco District

May 05, 2011



**US Army Corps of Engineers**  
**BUILDING STRONG®**



**CORNERSTONE OF THE SOUTHWEST!**

# USACE – SPN: LEVEE WORKSHOP

**WELCOME:** On behalf of LTC DiCiro, Commander for the San Francisco District, South Pacific Division, U. S. Army Corps of Engineers, I would like to welcome you to the 4<sup>th</sup> Annual Levee Owner Workshop & Conference.

**MISSION:** To provide an open forum for exchanging USACE-SPN Levee Program information through collaboration.

**VISION:** Work together with our partners to deliver innovative and sustainable solutions for the nation's levee, water retention, engineering, and management challenges.



# USACE – SPN: LEVEE WORKSHOP AGENDA

## **0930: REGISTRATION:**

Attendee Sign-up, Name Badges & Seating

## **1000: INTRODUCTION:**

San Francisco District Command/Representative – *MAJ Giannini*

## **1005: NATIONAL LEVEE SAFETY PROGRAM (Policy Updates):**

ENG & TECH Services Chief and Levee Safety Officer, (LSO) – *John H. Jacobson*

## **1035: CURRENT LEVEE INSPECTION OVERALL RESULTS:**

LSPM – *Paul Schimelfenyg*

## **1105: FRMP PRESENTATION:**

FRMP PM – *Craig Conner*

## **1135: LEVEE INSPECTION PROGRAM (PL84-99):**

FCCE PM – *Bijan Nooranbakiht*

## **1200: LUNCH – Off-site (PLEASE RETURN BEFORE 1300)**



# USACE – SPN: LEVEE WORKSHOP AGENDA

**1300: INSPECTION OF COMPLETED WORKS:**

ICW PM – John Cheng

**1330: REGULATORY PRESENTATION:**

Regulatory Division – *Jane M. Hicks*

**1400: LEGAL PRESENTATION:**

Office of Counsel – *Merry Goodenough*

**1430: RESOURCE AGENCY PRESENTATION:**

Federal Emergency Management Agency – *Eric Simmons, CFM*

**1500: GROUP DISCUSSION:**

All Participants Q & A – *Duke E. Roberts*

**1530: CLOSING REMARKS:**

District Command/Representative – *MAJ Giannini*





# AGENDA

- **SPN Levee Safety Program**
- **References**
- **Recent Policy History**
- **Vertical Datum**
- **FEMA Levee Mapping**
- **Developing New Levee Safety Program**



# SPN LEVEE SAFETY PROGRAM

- **Acting Inspection of Completed Works (ICW) Program Manager – John Cheng in OR-E.**
- **Flood Control & Coastal Emergencies (FC&CE) Program Manager – Bijan Nooranbakht in OR-E.**
- **Chief Readiness Branch – Duke Roberts in OR-E.**
- **Chief Operations & Readiness - Mike Dillabough in OR.**
- **SPN Flood Risk Management Program (FRMP) Manager – Craig Conners in ET-PF.**
- **Acting SPN Vertical Datum Coordinator (VDC) – Mark Gibson in ET-CT.**
- **SPN Dam and Levee Safety Program Manager (DSPM/LSPM) – Paul Schimelfenyg in ET-EG.**
- **SPN Dam and Levee Safety Officer (DSO/LSO) – Jake Jacobson in ET.**
- **SPN Dam/Levee Safety Program Committee – Senior leadership oversight.**



# REFERENCES

- **Existing References:**

- **Public Law 84-99 Created Rehabilitation and Inspection Program (RIP).**
- **Code of Federal Regulations, Title 33, Part 203 established the RIP.**
- **Code of Federal Regulations, Title 33, Part 208 established O&M on Federal Projects.**
- **Engineer Regulation 500-1-1, 30 Sep 01, Chapter 5 details the RIP.**
- **Engineer Pamphlet 500-1-1, 30 Sep 01, Chapter 5 details the RIP, Appendix B has levee inspection guide, and Appendix E outlines procedures for regional variance to levee vegetation standards.**
- **Levee Owner's Manual for Non-Federal Flood Control Works, Mar 06, Chapter 6 details the RIP and Chapter 7 details Corps Inspections.**

- **Existing Corps Websites:**

- **National Flood Risk Management Program**  
<http://www.iwr.usace.army.mil/nfrmp/guidance.cfm>.
- **Flood Risk Management Gateway** <http://operations.usace.army.mil/flood.cfm>.
- **Publications and Documents** <http://www.usace.army.mil/publications/>.
- **Levee Owner's Manual for Non-Federal Flood Control Works**  
[http://www.iwr.usace.army.mil/nfrmp/docs/USACE\\_NonFed%20Levee%20Owner's%20Manual\\_Mar06.pdf](http://www.iwr.usace.army.mil/nfrmp/docs/USACE_NonFed%20Levee%20Owner's%20Manual_Mar06.pdf)



# RECENT POLICY HISTORY

1 OF 4

- 29 Aug 05 – Hurricane Katrina.
- 01 Jun 06 – Draft IPET Report.
- 12 Aug 06 – 12 Actions for Change.
- 04 Dec 06 – HQ Interim Guidance on Vertical Datum.
- 26 Mar 07 – Interim Final IPET Report.
- 20 Apr 07 – USACE White Paper – Treatment of Vegetation within Local Flood Damage Reduction Systems.
- 01 Jun 07 – IPET Decision Making Chronology.
- 12 Jun 07 – HQ Interim Guidance on Levee Vegetation, which references a new Levee Inspection Report Form.
- 01 Jul 07 – HQ Guidance on Evaluation of Vertical Datums.
- 28-29 Aug 07 – Vegetation Symposium in Sacramento.
- 17 Sep 07 – HQ Draft Guidance on Levee Certification.
- 19 Sep 07 – OMB/OSTP Guidance on Risk Analysis.
- 08 Nov 07 – WRDA, Title IX, National Levee Safety Act.
- 16 Nov 07 – HQ Guidance on Levee Safety Program Implementation.



# RECENT POLICY HISTORY

2 OF 4

- **08 Apr 08 – HQ Supplement to Interim Guidance on Vegetation.**
- **05 Jun 08 – Draft ETL 1110-2-571, Interim Guidance on Vegetation.**
- **09 Dec 08 – Battelle’s Final Independent Review Report for USACE Vegetation Policy for Local Flood Damage Reduction Systems.**
- **17 Dec 08 – HQ Policy Guidance Letter on Periodic Inspection Procedures for the Levee Safety Program.**
- **09 Jan 09 – HQ Guidance Memo on temporary extension of PL 84-99 for system wide improvements.**
- **20 Jan 09 – HQ Draft Recommendations for a National Levee Safety Program.**
- **27 Feb 09 – CA Central Valley Flood System Improvement Framework.**
- **01 Mar 09 – ER 1110-2-8160, Policies for Referencing Project Elevations Grades for National Vertical Datums.**
- **10 Apr 09 – ETL 1110-2-571, HQ Final Guidance on Vegetation.**



# RECENT POLICY HISTORY

3 OF 4

- 24 Apr 09 – FEMA Procedure Memo No. 52 and 53 on Levee Mapping.
- 28 Apr 09 – HQ Publishes ARRA Stimulus Projects, which includes \$90M nation wide for Periodic Inspections of levees, and \$900K for SPN ICW.
- 05 May 09 – HQ “Corps Point” on USACE Vegetation Standards.
- 01 Jul 09 – EC 1110-2-6070, Comprehensive Evaluation of Project Datums.
- 05 Oct 09 – HQ Memo on USACE National Flood Risk Management Program Initial Guidance.
- 09 Feb 10 – HQ Policy Guidance Letter – Variance for Vegetation Standards for Levees and Floodwalls.
- 09 Feb 10 – HQ Publishes in Federal Register proposal for “Process for Requesting a Variance From Vegetation Standards for Levees and Floodwalls”.
- 10 Mar 10 – HQ Extends Federal Register Comment Period to 25 Apr 10.
- 04 May 10 – HQ “Strong Point” on status of USACE Levee Safety Program.



# RECENT POLICY HISTORY

4 OF 4

- **31 Aug 10 – EC 1110-2-6067, USACE Process for the National Flood Insurance Program (NFIP) Levee System Evaluation.**
- **07 Sep 10 – HQ Fact Sheet and FAQ on Levee System Evaluation for National Flood Insurance Program.**
- **10 Oct 10 – HQ “Strong Point” on National Flood Insurance Program’s Levee System Evaluation.**
- **17 Dec 10 – USACE/ASDSO joint letter on “Conduct a National Inventory of Levees & Expand the National Levee Database”.**
- **31 Dec 10 – EM 1110-2-6056, Standards and Procedures for Referencing Project Elevation Grades to Nationwide Vertical Datums (Section 6).**
- **27 Jan11 – SPD Periodic Policy Clarification that CG funding should pay for first PI inspection at project construction completion and turnover to sponsor.**
- **22 Feb 11 – HQ Memo indicating draft Vegetation Variance Request Process is being delayed in finalization and should still be used as interim guidance. New draft policy will be published in Federal Register in the near future and address new submission date of existing variances.**



# VERTICAL DATUM

- **ER 1110-2-8160, “Policies for Referencing Project Elevations Grades for National Vertical Datums”, dated 01 Mar 09, requires the following:**
  - **Corrective action plan for all Corps projects.**
  - **All Corps projects must use the correct vertical datum (NAVD 88). Check controlling monuments for proper density, meta data, datum conversion errors, subsidence, or damage. Confirm permanent water level gages and network is using proper vertical datum (NAVD 88) and adequately defines the spatially varying hydraulic or tidal datum (MLLW) in the project region.**
  - **Reassessments of vertical datum on each project should be performed periodically ranging from every 5 years in high subsidence or seismic areas to 20 years in stable, non-tidal locations. Periodic Inspections of levees should confirm adequate data is being collected and horizontal and vertical datum's are current.**
- **SPN obtained ARRA Stimulus funding to contract out to evaluate all SPN ICW and FCCE levees. The evaluation reports are in internal review and will be sent to levee owners for their review over the next few months. The evaluation reports will indicate if the sponsor needs to prepare or not vertical datum corrective action plans for their levees.**



# FEMA LEVEE MAPPING

- **On 31 Aug 10 USACE published EC 1110-2-6067, USACE Process for the National Flood Insurance Program (NFIP) Levee System Evaluation.**
  - **Uses new USACE terminology such as “levee evaluation” instead of “levee certification”.**
  - **Provides new guidance on “incised channels” and includes “floodwalls” as levees. (Para 9.f(1))**
- **On 11 Mar 11 FEMA issued interim guidance for their Risk Map Program “without levee” modeling methodology.**
  - **FEMA will no longer use “without levee” approach on flood risk maps.**
  - **FEMA will temporarily withhold issuing flood risk maps for those communities that do not meet 44 CFR Part 65.**
  - **FEMA will publish new guidance in the near future.**



# NEW LEVEE SAFETY PROGRAM

- USACE is developing a new Engineer Circular (EC) for policy and guidance of the overall USACE Levee Safety Program.
- Three webinars have been conducted to gather internal and external stakeholder input on the EC concepts, policies, and procedures (15-16 Dec 10, 2-3 Feb 11, and 9-10 Mar 11).
- Two EC Workshops covering same agenda will be conducted 24-26 May 11 in Washington DC and 28-30 Jun 11 in Denver CO. External stakeholders are invited to participate in either workshop. POC is Stephen O'Leary at [stephen.d.oleary@usace.army.mil](mailto:stephen.d.oleary@usace.army.mil) or 304-399-5841.



# QUESTIONS

- **Contact:**
- **[john.h.jacobson@usace.army.mil](mailto:john.h.jacobson@usace.army.mil)**
- **415-503-6820**



# BACKUP SLIDES

- **Levee Vegetation**
- **Levee Vegetation Variance**



# LEVEE VEGETATION

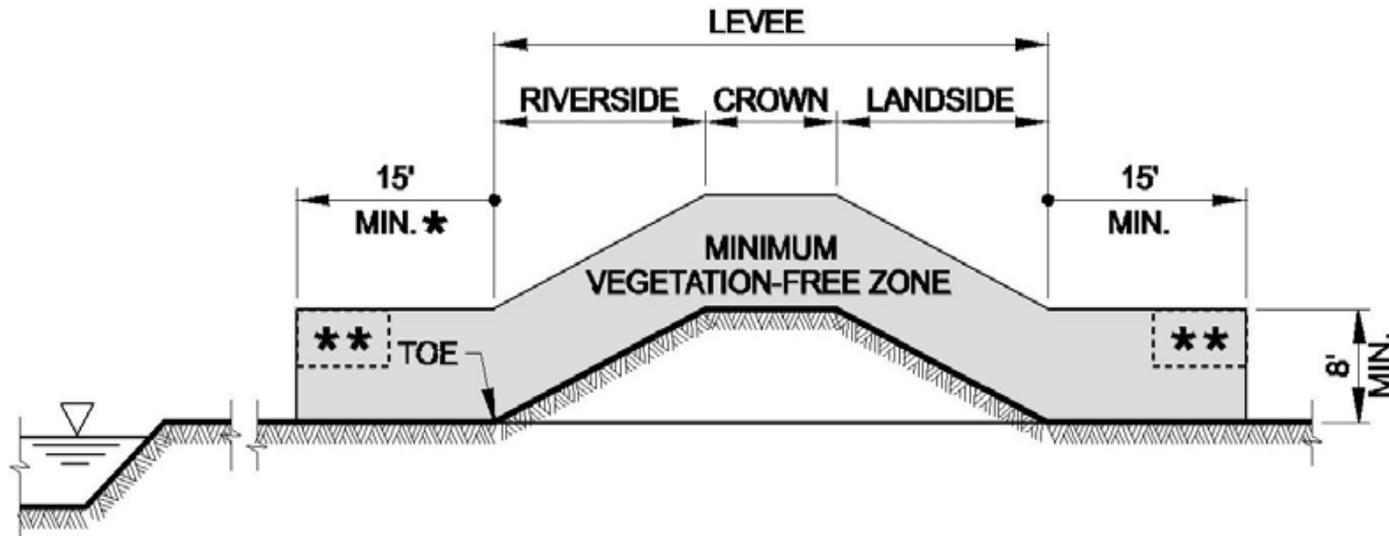
1 OF 6

- ETL 1110-2-571, “Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures”, Issued as Final Guidance on 10 Apr 09.
- Mandates that public safety is primary concern of USACE and vegetation policies can not compromise levee safety standards, nor compromise effective levee surveillance, monitoring, inspections, maintenance, and flood fighting.
- Established 15’ wide by 8’ high Vegetation Free Zones (VFZ) on and outside levee toes, except for grasses, which must be mowed at least once a year for annual inspections.
- Only two exceptions without formal regional variance
  - Tree trunks half in VFZ.
  - Newly planted trees that crowns will be clear of VFZ within 10 years.
- Establishes various Root Free Zones (RFZ).
- Allows Vegetation Management Zones (VMZ) outside the VFZ.
- Willows encouraged riverward of VFZ. ETL references, but does not provide detailed guidance on Endangered Species Act issues.
- See the 20 typical VFZ, RFZ, and VMZ cross sections in the ETL.
- Requires control and repair to all rodent holes in levees for public safety.



# LEVEE VEGETATION

2 OF 6



\* 15' OR DISTANCE TO EDGE OF NORMAL WATER SURFACE, IF LESS

\*\* IN THIS 4' X 7' TRANSITION ZONE, TEMPORARY OBSTRUCTION BY LIMBS AND CROWN IS ALLOWED DURING DEVELOPMENT OF NEW PLANTINGS, FOR UP TO 10 YEARS

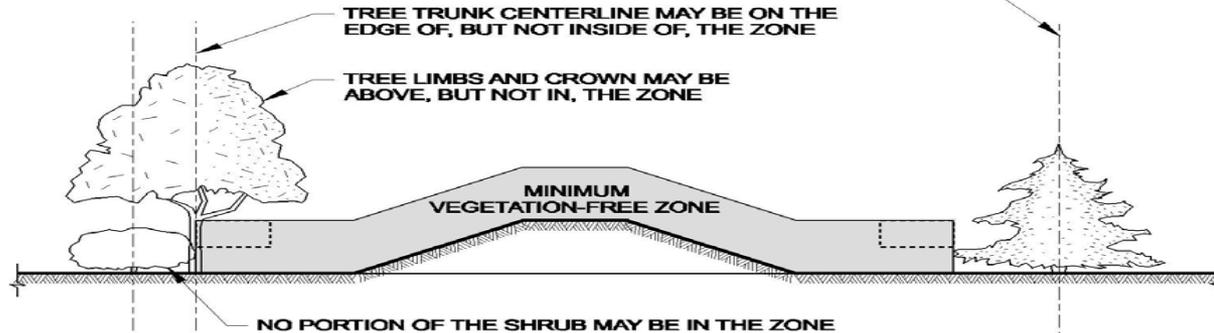
▽ NORMAL WATER SURFACE



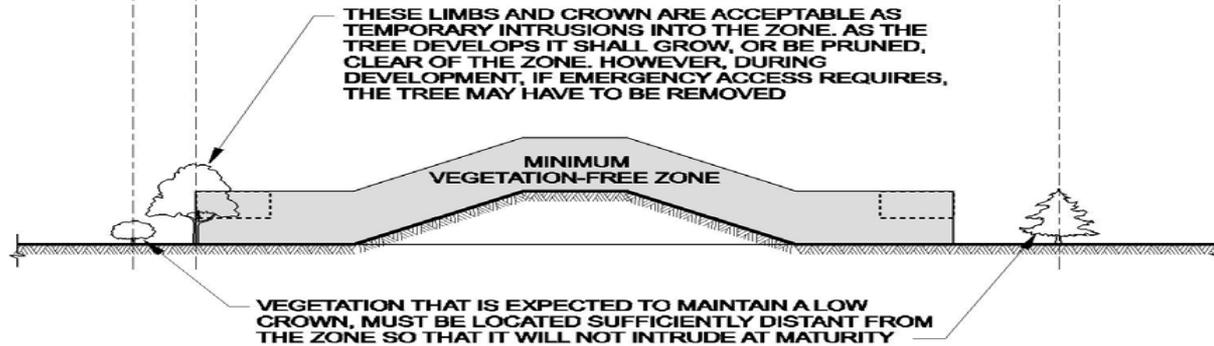
# LEVEE VEGETATION

3 OF 6

TREES WITH LOW LIMBS OR CROWN, SUCH AS A CONIFEROUS TREE, MUST HAVE TRUNK CENTERLINE SUFFICIENTLY DISTANT FROM THE ZONE THAT NO PART OF THE TREE IS IN THE ZONE. IF THIS TREE WERE TO GROW INTO THE ZONE, IT WOULD HAVE TO BE EITHER PRUNED OR REMOVED



a. MATURE TREES AND SHRUB



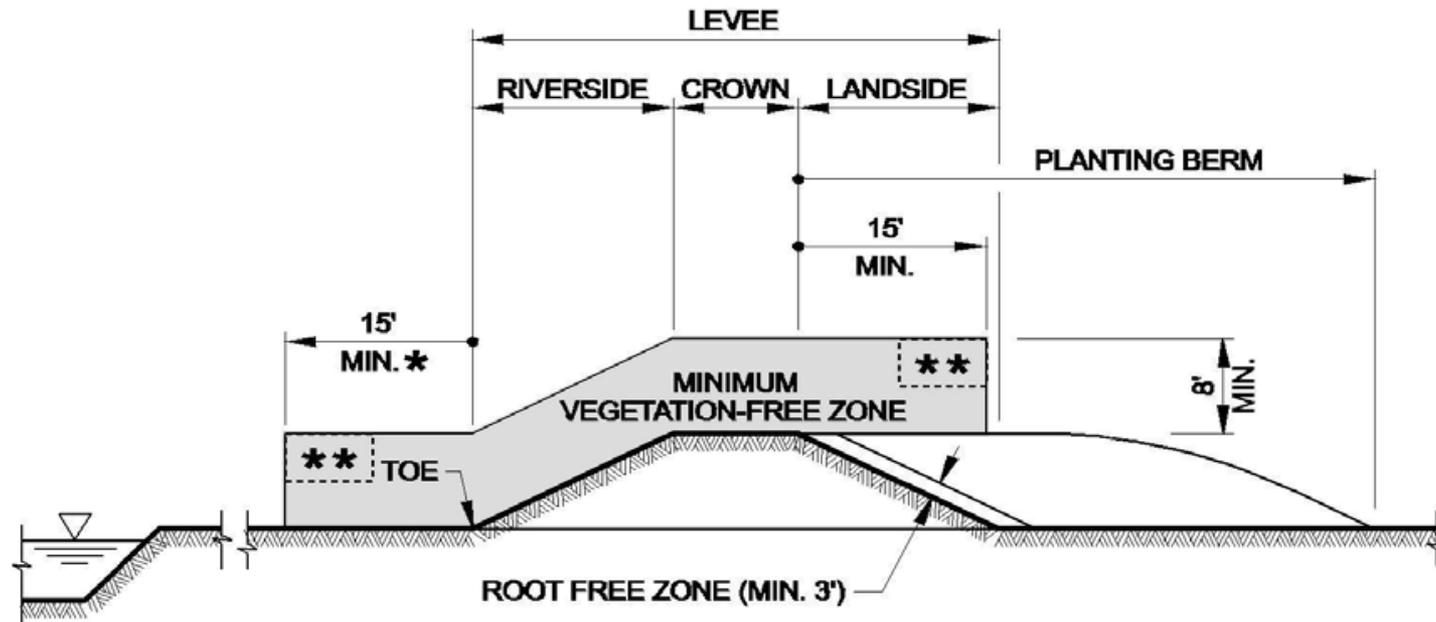
b. NEWLY PLANTED TREES AND SHRUB

NOTE: THE MIRROR IMAGE OF THIS FIGURE WOULD BE EQUALLY CORRECT, REGARDLESS OF WHICH SIDE IS THE RIVERSIDE



# LEVEE VEGETATION

4 OF 6

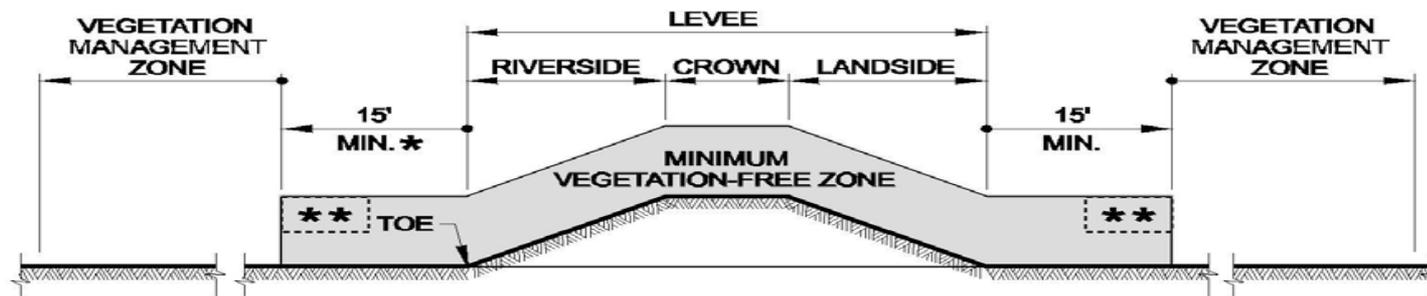


- \* 15' OR DISTANCE TO EDGE OF NORMAL WATER SURFACE, IF LESS
- \*\* IN THIS 4' X 7' TRANSITION ZONE, TEMPORARY OBSTRUCTION BY LIMBS AND CROWN IS ALLOWED DURING DEVELOPMENT OF NEW PLANTINGS, FOR UP TO 10 YEARS
- ▽ NORMAL WATER SURFACE



# LEVEE VEGETATION

5 OF 6



\* 15' OR DISTANCE TO EDGE OF NORMAL WATER SURFACE, IF LESS

\*\* IN THIS 4' X 7' TRANSITION ZONE, TEMPORARY OBSTRUCTION BY LIMBS AND CROWN IS ALLOWED DURING DEVELOPMENT OF NEW PLANTINGS, FOR UP TO 10 YEARS

▽ NORMAL WATER SURFACE

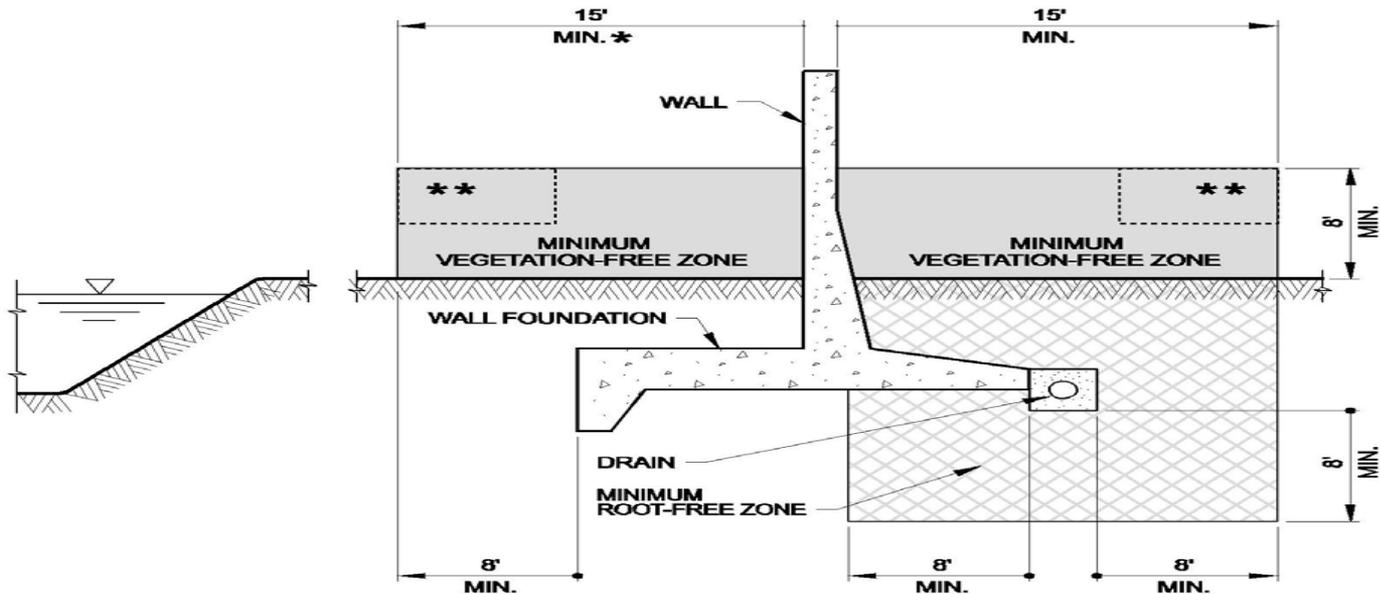
## NOTES:

1. THE VEGETATION-MANAGEMENT ZONE ALLOWS FOR ACCESS, FOR THE PURPOSE OF INSPECTION, AND MODIFICATION OR REMOVAL OF ANY PLANT WHOSE LIMB, FOILAGE, OR ROOT BEHAVIORS BECOME A THREAT TO PROJECT RELIABILITY.
2. THE APPROPRIATE WIDTH OF THE VEGETATION-MANAGEMENT ZONE SHALL BE DETERMINED BY THE DESIGN TEAM: 35 FEET WILL BE SUFFICIENT IN MOST CASES.
3. THE VEGETATION-MANAGEMENT ZONE MAY BE ESTABLISHED BY EASEMENT.
4. THIS FIGURE SHOWS THE VEGETATION-MANAGEMENT ZONE IN THE CASE OF A LEVEE; HOWEVER, IT IS EQUALLY APPROPRIATE IN THE CASE OF ANY OTHER FLOOD DAMAGE REDUCTION STRUCTURE OR APPURTENANCE: IT'S USUAL RELATIONSHIP IS TO THE VEGETATION-FREE ZONE.



# LEVEE VEGETATION

6 OF 6



\* 15' OR DISTANCE TO EDGE OF NORMAL WATER SURFACE, IF LESS

\*\* IN THIS 4' X 7' TRANSITION ZONE, TEMPORARY OBSTRUCTION BY LIMBS AND CROWN IS ALLOWED DURING DEVELOPMENT OF NEW PLANTINGS, FOR UP TO 10 YEARS

▽ NORMAL WATER SURFACE

NOTE: THE HORIZONTAL DIMENSION OF THE MINIMUM VEGETATION-FREE ZONE SHALL BE THE GREATER OF:

(A) THE 15-FOOT MINIMUM, AS DIMENSIONED ABOVE GRADE; OR  
(B) AS DIMENSIONED FROM THE BELOW-GRADE STRUCTURE



# VEGETATION VARIANCES

1 OF 9

- **ETL 1110-2-571, dated 10 Apr 09, Paragraph 1-3. Policy:**
  - **a. Where the safety of the structure is not compromised, and effective surveillance, monitoring, inspection, maintenance, and flood-fighting of the facility are not adversely impacted, appropriate landscape planting (trees, shrubs, vines, forbs, and grasses) may be incorporated into the design of all flood damage reduction projects, subject to the limitations set forth in this document. Because landscape plantings enhance the environment, with respect to both natural systems and human use, they are to be considered in all flood damage reduction project planning and design studies and will be fully presented in design documentation reports. For projects in which the maintenance of the completed facility will be the responsibility of the local sponsor, the landscape planting will be fully coordinated with the local sponsor during planning and design to determine the sponsor's desires and to obtain assurances that the sponsor is capable of, and committed to, the proper maintenance of the vegetation.**



# VEGETATION VARIANCES

2 OF 9

- **ETL 1110-2-571, dated 10 Apr 09, Paragraph 1-3. Policy:**
  - ***b.* In certain instances, to further enhance environmental values or to meet state or federal laws and/or regulations, the local sponsor may request a variance from the standard vegetation guidelines set forth in this ETL. Vegetation variances for either federal or non-federal flood damage reduction systems may be permitted. The vegetation variance must meet the following two criteria:**
    - ✓ **(1) The variance must be shown to be necessary, and the only feasible means, to**
      - **(a) preserve, protect, and enhance natural resources and/or**
      - **(b) protect the rights of Native Americans, pursuant to treaty and statute.**
    - ✓ **(2) With regard to flood damage reduction systems, the variance must assure that**
      - **(a) safety, structural integrity, and functionality are retained, and**
      - **(b) accessibility for maintenance, inspection, monitoring, and flood-fighting are retained. Note that, as used here, the term “retained” assumes a pre-variance condition that is fully consistent with the requirements set forth in this ETL, and any other applicable criteria.**



# VEGETATION VARIANCES

3 OF 9

**ETL 1110-2-571, dated 10 Apr 09, Paragraph 1-3. Policy:**

- **b. (continued) Periodic clearing of some types of vegetation, both woody (trees, shrubs, and vines) and non-woody (grasses and forbs), will be performed, as needed, to maintain the conditions described in the second criterion. The variance will not be a substitute for poor maintenance practices.**
  
- **c. Any addition of landscape plantings to existing flood damage reduction systems must comply with the project's O&M manual. New plantings may not be approved without an appropriately detailed and documented engineering evaluation to ensure that design intent and safety criteria are maintained as originally authorized.**



# VEGETATION VARIANCES

4 OF 9

- **09 Feb 10 – HQ Publishes in Federal Register a proposal for “Process for Requesting a Variance From Vegetation Standards for Levees and Floodwalls”. The comment period was extended to 24 Apr 10, which also extended existing variances being resubmitted until 31 Dec 10. The proposed process is considered current interim guidance.**
- **Proposal is based upon ETL 1110-2-571 criteria. Proposal intended for future vegetation plantings, not existing vegetation that resulted from inadequate operations and maintenance.**



# VEGETATION VARIANCES

5 OF 9

- Existing vegetation variances, agreements, or other deviations not submitted for a Agency Technical Review (ATR) through this proposed process by 31 Dec 10 may no longer be considered valid. This could include existing projects that had vegetation designed into them not in accordance with ETL 1110-2-571.



# VEGETATION VARIANCES

6 OF 9

- **Contents of Sponsor's Proposed Vegetation Variance Request:**
  - **Signed Vegetation Variance Request and Agreement Form.**
  - **General description of levee system.**
  - **Detailed plans and section drawings showing project features, variance boundaries, vegetation free zones, vegetation management zones, vegetation species and maturity size, and mitigation measures on levee.**
  - **Reasons why vegetation variance is only feasible means.**
  - **Engineering analysis.**
  - **Recent Routine and Periodic Inspection Reports from local USACE District.**
  - **History of flood events.**
  - **Vegetation Maintenance Plan for incorporation into Levee O&M Manual.**
  - **NEPA and ESA documents.**



# VEGETATION VARIANCES

7 OF 9

- **Proposed process for approval of vegetation variance requests:**
  - **Sponsor submits proposed vegetation variance, per ETL 1110-2-571 criteria.**
  - **Various reviews for acceptance or non-acceptance are performed by:**
    - ✓ **District LSO**
    - ✓ **District Commander**
    - ✓ **Division LSO**
    - ✓ **Division Commander**
    - ✓ **ATR lead by USACE Risk Management Center**
  - **The HQUSACE LSO is final approval authority for all vegetation variance requests.**



# VEGETATION VARIANCES

8 OF 9

- **Special Considerations:**

- **Burdon on sponsor to provide adequate documentation for review.**
- **Variances only considered on individual levee systems.**
- **No vegetation variance allowed for woody vegetation on the portions of the levee at the crown, the upper third of the river side slope, the land side slope, and within 15 feet of the land side toe or pre-existing right of way.**
- **Waterside planting berms are allowed only by approved variance.**
- **The vegetation variance process is not a mechanism to validate conditions that have resulted from inadequate operations and maintenance.**



# VEGETATION VARIANCES

9 OF 9

- **Special Considerations:**

- **The sponsor is responsible for providing all documentation required by the National Environmental Policy Act (NEPA) and Endangered Species Act (ESA) Section 7 consultation with any vegetation variance request.**
- **If implementation of a vegetation variance will modify or alter an existing Federally authorized levee system in the PL 84-99 program, then a concurrent Section 208.10/408 review will be necessary.**
- **USACE Districts may apply for vegetation variance requests in conjunction with planning and design of future rehabilitation under PL 84-99 and associated measures needed to comply with the Endangered Species Act.**
- **USACE Districts may apply for vegetation variance requests using project funds for projects in the preconstruction, engineering, and design phases.**





# THE ROAD TO IMPROVEMENT?



# REVIEW OF FY10 TOPICS

- **ROUTINE INSPECTIONS (RIs)**
  - Annual or biennial visual inspection
  - Measure of Operation & Maintenance
- **PERIODIC INSPECTIONS (PIs)**
  - 5-Year visual inspection & design assessment
  - Measure of Operation & Maintenance and whether the Design meets current standards
  - Initial Periodic Inspections mainly performed with ARRA funds
- **LEVEE SCREENING ASSESSMENTS (LSAs)**
  - One time assessment; may be updated
  - Measure of levee performance
  - Risk based
  - Sponsor involvement now allowed



# UPDATES

- **MODIFICATIONS (ICW Projects)**

- **Two Submissions may be required**
- **ICW Compliance**
- **Water Quality Certificate**

- **SURVEY**

- **National Vertical Datum Workshops**
  - ✓ **1455 Market Street**
  - ✓ **2hr Overview – May 17 at 100pm, May 18 at 0930am**
  - ✓ **3hr Technical Session – May 18 at 100pm**
  - ✓ **Brochures available at information table**



# UPDATES CONTINUED

## ➤ Surveys of Levees

- ✓ Funds are available and SPN is in the ERDC Queue
- ✓ Ground survey using new control
- ✓ Surveys should start in the July-August timeframe

## ➤ GIS Lidar Information

- ✓ SPN' GIS section has compiled an inventory of available Lidar and elevation data in the Bay area
- ✓ Summary maps of the data inventoried are available at the information table
- ✓ Dan Specht ([Daniel.Specht@usace.army.mil](mailto:Daniel.Specht@usace.army.mil)) can be contacted to obtain the owners of the data



# FY09/FY10 INSPECTION RESULTS OVERALL

<b>• ICW</b>	<b><u>A</u></b>	<b><u>M</u></b>	<b><u>U</u></b>
➤ <b>Levees/Channels</b>	<b>0</b>	<b>27</b>	<b>5</b>
➤ <b>Channels Only</b>	<b>0</b>	<b>3</b>	<b>1</b>
➤ <b>Erosion Control</b>	<b>0</b>	<b>3</b>	<b>0</b>
<b>• FCCE</b>			
➤ <b>Levees/Channels</b>	<b>0</b>	<b>7</b>	<b>4</b>
➤ <b>Channels Only</b>	<b>0</b>	<b>36</b>	<b>1</b>



# FY09/FY10 INSPECTION RESULTS

## GENERAL - O&M MANUALS

	<u>A</u>	<u>M</u>	<u>U</u>
• <b>ICW</b>			
➤ Levees/Channels	7	25	0
➤ Channels Only	2	2	0
➤ Erosion Control	0	3	0
• <b>FCCE</b>			
➤ Levees/Channels	0	10	1
➤ Channels Only	15	22	0



# FY09/FY10 INSPECTION RESULTS

## GENERAL – EMERGENCY SUPPLIES

<b>• ICW</b>	<b><u>A</u></b>	<b><u>M</u></b>
➤ <b>Levees/Channels</b>	<b>14</b>	<b>18</b>
➤ <b>Channels Only</b>	<b>3</b>	<b>1</b>
➤ <b>Erosion Control</b>	<b>2</b>	<b>1</b>
<b>• FCCE</b>		
➤ <b>Levees/Channels</b>	<b>4</b>	<b>7</b>
➤ <b>Channels Only</b>	<b>35</b>	<b>2</b>



# FY09/FY10 INSPECTION RESULTS

## GENERAL – EAP

<b>• ICW</b>	<b><u>A</u></b>	<b><u>M</u></b>
➤ <b>Levees/Channels</b>	<b>6</b>	<b>26</b>
➤ <b>Channels Only</b>	<b>1</b>	<b>3</b>
➤ <b>Erosion Control</b>	<b>0</b>	<b>3</b>
<b>• FCCE</b>		
➤ <b>Levees/Channels</b>	<b>2</b>	<b>9</b>
➤ <b>Channels Only</b>	<b>12</b>	<b>25</b>



# FY09/FY10 INSPECTION RESULTS

## LEVEES - VEGETATION

	<u>A</u>	<u>M</u>	<u>U</u>
• <b>ICW</b>			
➤ <b>Levees/Channels</b>	1	17	13
➤ <b>Channels Only</b>	na	na	na
➤ <b>Erosion Control</b>	na	na	na
• <b>FCCE</b>			
➤ <b>Levees/Channels</b>	0	8	3
➤ <b>Channels Only</b>	na	na	na



# FY09/FY10 INSPECTION RESULTS LEVEES - ENCROACHMENTS

<b>• ICW</b>	<b><u>A</u></b>	<b><u>M</u></b>	<b><u>U</u></b>
➤ <b>Levees/Channels</b>	<b>11</b>	<b>17</b>	<b>3</b>
➤ <b>Channels Only</b>	<b>na</b>	<b>na</b>	<b>na</b>
➤ <b>Erosion Control</b>	<b>na</b>	<b>na</b>	<b>na</b>
<b>• FCCE</b>			
➤ <b>Levees/Channels</b>	<b>5</b>	<b>6</b>	<b>0</b>
➤ <b>Channels Only</b>	<b>na</b>	<b>na</b>	<b>na</b>



# FY09/FY10 INSPECTION RESULTS

## LEVEES - STABILITY

### • ICW

	<u>A</u>	<u>M</u>	<u>U</u>
➤ Levees/Channels	22	8	1
➤ Channels Only	na	na	na
➤ Erosion Control	na	na	na

### • FCCE

➤ Levees/Channels	9	2	0
➤ Channels Only	na	na	na



# FY09/FY10 INSPECTION RESULTS

## LEVEES - EROSION

### • ICW

	<u>A</u>	<u>M</u>	<u>U</u>
➤ Levees/Channels	19	11	1
➤ Channels Only	na	na	na
➤ Erosion Control	na	na	na

### • FCCE

➤ Levees/Channels	5	5	1
➤ Channels Only	na	na	na



# FY09/FY10 INSPECTION RESULTS

## LEVEES - RODENTS

### • ICW

	<u>A</u>	<u>M</u>	<u>U</u>
➤ Levees/Channels	11	18	2
➤ Channels Only	na	na	na
➤ Erosion Control	na	na	na

### • FCCE

➤ Levees/Channels	5	6	0
➤ Channels Only	na	na	na



# FY09/FY10 INSPECTION RESULTS

## LEVEES - CULVERTS

	<u>A</u>	<u>M</u>	<u>U</u>	<u>N/A</u>
• <b>ICW</b>				
➤ <b>Levees/Channels</b>	9	15	3	4
➤ <b>Channels Only</b>	na	na	na	na
➤ <b>Erosion Control</b>	na	na	na	na
• <b>FCCE</b>				
➤ <b>Levees/Channels</b>	1	2	0	8
➤ <b>Channels Only</b>	na	na	na	na



# FY09/FY10 INSPECTION RESULTS

## LEVEES - SEEPAGE

### • ICW

	<u>A</u>	<u>M</u>	<u>U</u>
➤ Levees/Channels	23	7	1
➤ Channels Only	na	na	na
➤ Erosion Control	na	na	na

### • FCCE

➤ Levees/Channels	11	0	0
➤ Channels Only	na	na	na



# FY09/FY10 INSPECTION RESULTS

## CHANNELS - VEGETATION

	<u>A</u>	<u>M</u>	<u>U</u>
• <b>ICW</b>			
➤ <b>Levees/Channels</b>	9	15	6
➤ <b>Channels Only</b>	1	3	0
➤ <b>Erosion Control</b>	0	3	0
• <b>FCCE</b>			
➤ <b>Levees/Channels</b>	3	7	0
➤ <b>Channels Only</b>	5	32	0



# FY09/FY10 INSPECTION RESULTS

## CHANNELS - SHOALING

	<u>A</u>	<u>M</u>	<u>U</u>
• <b>ICW</b>			
➤ <b>Levees/Channels</b>	<b>11</b>	<b>16</b>	<b>3</b>
➤ <b>Channels Only</b>	<b>1</b>	<b>3</b>	<b>0</b>
➤ <b>Erosion Control</b>	<b>2</b>	<b>1</b>	<b>0</b>
• <b>FCCE</b>			
➤ <b>Levees/Channels</b>	<b>5</b>	<b>5</b>	<b>0</b>
➤ <b>Channels Only</b>	<b>13</b>	<b>23</b>	<b>1</b>



# FY09/FY10 INSPECTION RESULTS

## CHANNELS - EROSION

	<u>A</u>	<u>M</u>	<u>U</u>
• <b>ICW</b>			
➤ <b>Levees/Channels</b>	<b>24</b>	<b>5</b>	<b>1</b>
➤ <b>Channels Only</b>	<b>3</b>	<b>1</b>	<b>0</b>
➤ <b>Erosion Control</b>	<b>0</b>	<b>2</b>	<b>1</b>
• <b>FCCE</b>			
➤ <b>Levees/Channels</b>	<b>9</b>	<b>1</b>	<b>0</b>
➤ <b>Channels Only</b>	<b>26</b>	<b>11</b>	<b>0</b>



# PRELIMINARY DESIGN ASSESSMENT AND SCREENING RESULTS

- **DESIGN ASSESSMENT**

- Hydrology and Hydraulics
- Seepage
- Stability
- Culverts
- Vertical Datum

- **LEVEE SCREENING ASSESSMENTS**

- Overtopping
- Seepage
- Stability
- Erosion



# THE PATH FORWARD – *HOW* *CAN SPN HELP?*

- Funding?
- Annual one on one meeting with Sponsor?
- An additional workshop?
- More Emails and/or Telecons?
- Fewer inspections?
- Something else?



# **U.S. Army Corps of Engineers** **San Francisco District** **4<sup>th</sup> Annual Levee Owners Workshop**

## **FLOOD RISK MANAGEMENT and other CORPS PROGRAMS**

### **Craig Conner**

Flood Risk Management  
Program Manager and Planner  
San Francisco District

5 May 2011



US Army Corps of Engineers  
**BUILDING STRONG**<sup>®</sup>



**CORNERSTONE OF THE SOUTHWEST!**

# RECENT POLICY CHANGES

- EC 1110-2-6067 (31 August 2010) – policy on Corps NFIP Levee System Evaluation (formerly Corps levee certification)
- No Policy Changes, but . . .
- Vegetation Policy (ETL 1110-2-571) and Variance – lots of discussion and not yet finalized
- Corps Review Policy (1165-2-209) – being implemented more consistently across programs reflecting national standards
- Silver Jackets coming to CA?  
(<http://www.nfrmp.us/state/> )

**Also, FEMA & DWR has made changes too**



# GOALS OF NATIONAL FLOOD RISK MANAGEMENT PROGRAM (NFRMP)

<http://www.nfrmp.us/>

- Providing current and accurate floodplain information to the public and decision makers
- Identifying and assessing flood hazards posed by aging flood damage reduction infrastructure
- Improving public awareness and comprehension of flood hazards and risk
- Integrating flood damage and flood hazard reduction programs across local, state, and Federal agencies
- Improving capabilities to collaboratively deliver and sustain flood damage reduction and flood hazard mitigation services to the nation



# **SUMMARY OF NFRMP GOALS**

**“COMMUNICATING FLOOD RISK WITHIN THE CORPS, TO OTHER FEDERAL, STATE, AND LOCAL AGENCIES, AND TO THE PUBLIC”**

**“REDUCING FLOOD RISK TO OUR NATION”**

**“SHARED RISK - SHARED SOLUTIONS”**



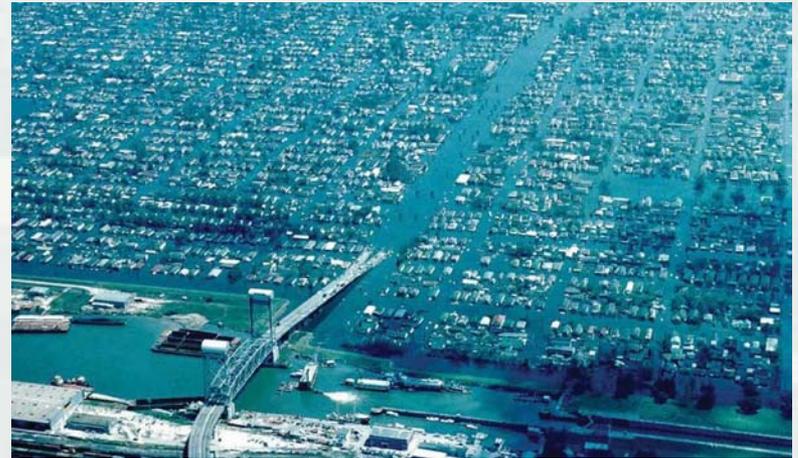
# WHAT IS FLOOD RISK?

**Flood Risk =**

**Probability of flood**

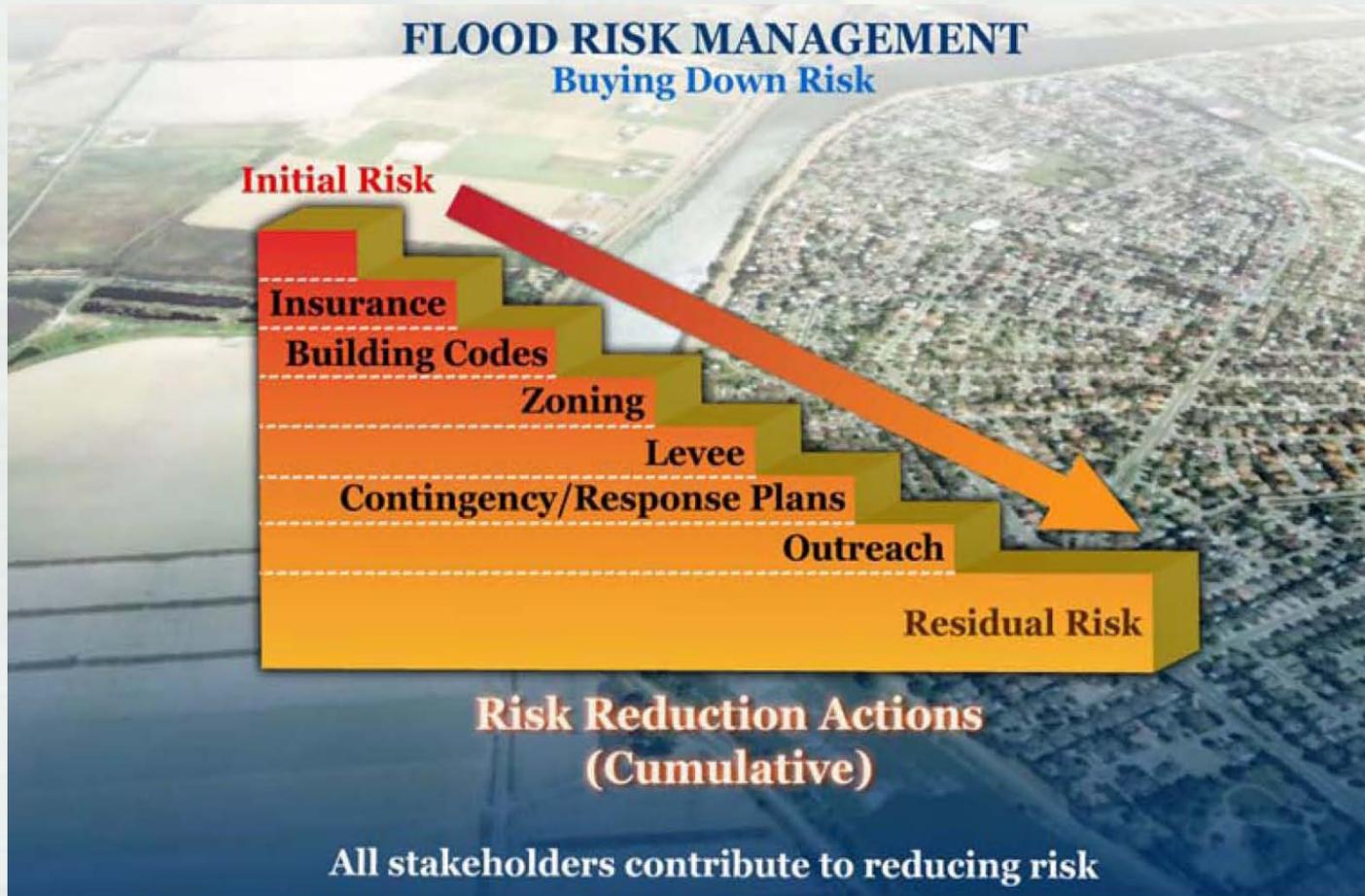
**X**

**Consequences of  
flood**



# REDUCING FLOOD RISK

-- EVERYONE PARTICIPATES --  
(Shared Risk – Shared Solutions)



# CONSIDER NON-STRUCTURAL MEASURES

- **Elevation**
- **Wet Floodproofing**
- **Dry Floodproofing**
- **Critical Facilities**
- **Relocation (Public/Private)**
- **Acquisition (Public/Private)**
- **Pre-emptive Buyouts, Options/Lease to Purchase**
- **Flood Warning & Emergency Evacuation Systems**



# LEVEE OWNERS RESPONSIBILITIES

- Required to “participate in and comply with applicable Federal floodplain management and flood insurance programs”
- **VOLUNTARY – NFIP: Community Rating System (CRS)**
  - Does your community participate?
  - What is your rating?
  - **NFIP (1% event) is NOT a Safety Standard --**



# FLOOD PLAIN MANAGEMENT SERVICES

- The Flood Plain Management Services (FPMS) program is to advise, recommend, educate, inform and provide technical support to others, both external and internal, so they can make informed decisions with respect to floodplain management.
- The FPMS program supports the full range of information and technical services as well as planning guidance, this program is well-suited to support the mission of the Flood Risk Management Program. Risk communication efforts can be completed using the FPMS program.



# FPMS PROGRAM GUIDELINES

- **Annual Fiscal Ceiling (\$15 Million)**
- **Cost-Sharing**
  - **100% Federally funded**
  - **sponsor can voluntarily contribute funds to expand scope**  
**(all funds go to the Treasury)**



# FPMS TYPES OF STUDIES

- **Flood Plain Delineation / Flood Hazard Evaluation Studies**
- **Dam Break Analysis Studies**
- **Flood Warning / Preparedness Studies**
- **Regulatory Floodway Studies**
- **Comprehensive Flood Plain Management Studies**
- **Flood Risk Management Studies**
- **Urbanization Impact Studies**
- **Stormwater Management Studies**
- **Flood Proofing Studies**
- **Inventory of Flood Prone Structures**
- **Evaluation of Levees for Potential FEMA Accreditation**



# PLANNING ASSISTANCE TO STATES

- **The Planning Assistance to States (PAS) program supports any effort or service pertaining to the planning for water and related resources of a drainage basin, watersheds or ecosystems or larger region of a state, for which the Corps has expertise. The planning process can extend through the functional design process and the preparation of generic structural design.**



# PAS PROGRAM GUIDELINES

- **Annual Fiscal Ceiling (\$15 Million, but limited to \$2 Million per state or tribe)**
- **Cost-Sharing**
  - **50% Federally/ 50% sponsor funded**
  - **sponsor can use in-kind services to meet 100% of its cost-share**
  - **Sec. 2013 of WRDA 2007 allows 100% Federal funding for PAS studies for hydrologic, economic, and environmental data and analyses**



# PAS PROGRAM GUIDELINES (2)

- **Broad coverage – “water and related resource” planning**
  - **PAS = study authority – no implementation authority**
- **Study Sponsors**
  - **Non-Federal sponsor = must be a recognized body of the State or tribe**
  - **NGO, non-profits are not allowed to cost-share PAS studies**



# PAS STUDIES & PARTNERS

## Types of Studies

- **Flood Risk Management**
- **Flood Plain Management**
- **Coastal Zone Management**
- **Dam Safety**
- **Environmental Restoration**
- **Hydrology and Hydraulics**
- **Water Supply/Demand**
- **General Water Resources Management**
- **Water Quality**
- **Wetlands Evaluation**

## Typical Study Partners

- **State Agencies**
- **Local Governments**
- **Federally Recognized Indian Tribes**
- **State-Funded Universities**



# FPMS & PAS STUDY PROCESS

- Letter of Request
- Scope of Work
- Letter of Agreement
- Receipt of Federal (& sponsor) funds
- Execute the study

-- Expect ~2 year budget process before study starts --



# OTHER RESOURCES

- FEMA (<http://www.fema.gov/>)

- FloodSmart (site for NFIP)

<http://www.floodsmart.gov/floodsmart/>

- DWR (<http://www.water.ca.gov/>)

- FloodSAFE

<http://www.water.ca.gov/floodsafe/>



# **FIXING EXISTING PROJECTS TO MEET CHANGED CONDITIONS**

## **-- What has Changed? --**

**Some projects and O&M manuals were completed decades ago, since that time:**

- National Environmental Policy Act of 1969 (NEPA)**
- Endangered Species Act of 1973 (ESA)**
- Hurricanes Katrina and Rita of 2005**
- Corps establishes NFRMP in 2006**
- FEMA Map Modernization**



# **FIXING EXISTING PROJECTS TO MEET CHANGED CONDITIONS**

## **-- CORPS PROCESSES --**

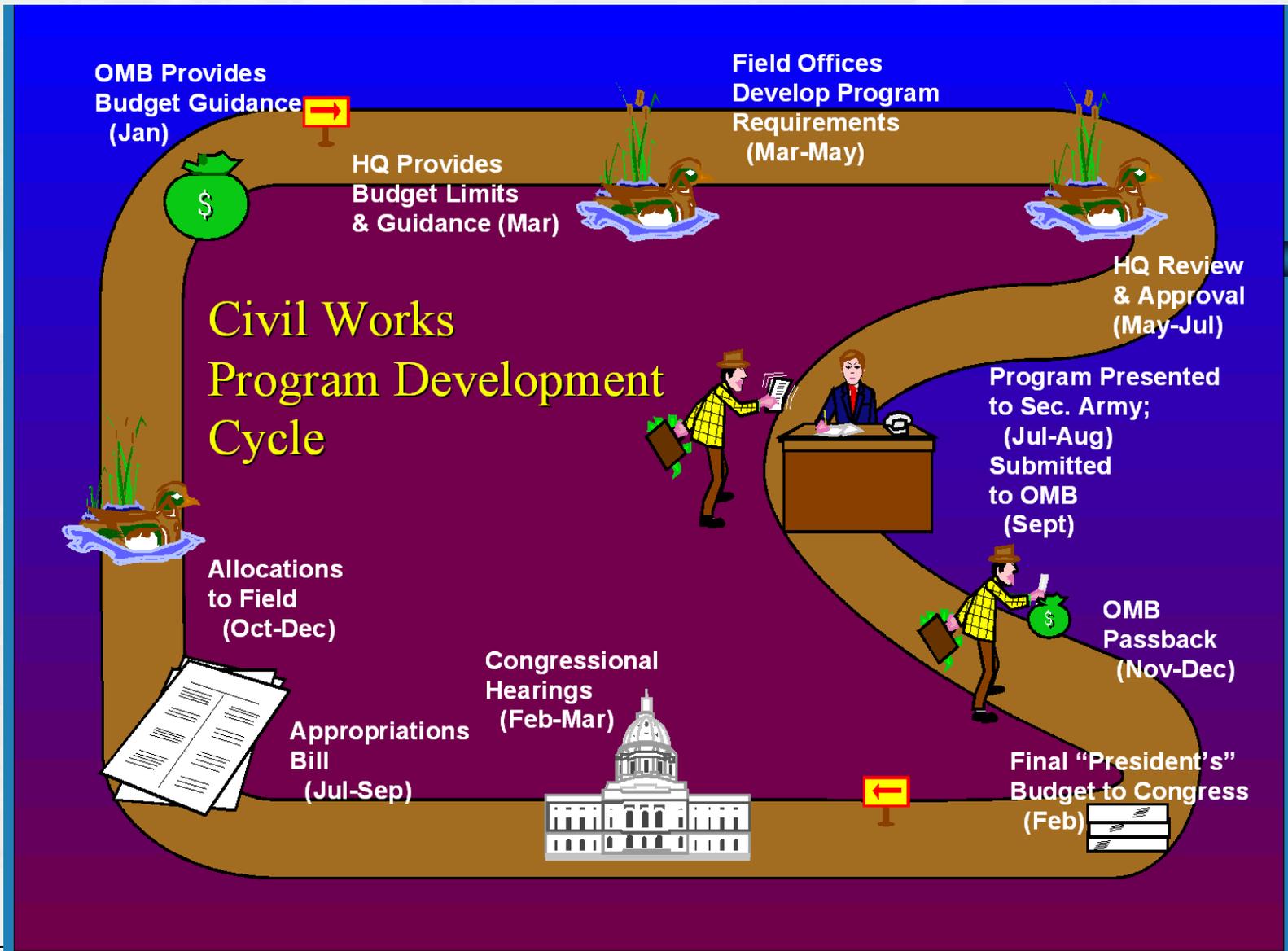
**What to do? – start simple, then progress in effort and costs as needed**

- O&M Manual revision – will it solve the problem?**
- Initial Appraisal (100% Corps funded, \$20K)**
  - will lead to another study**
- Start CAP or GI study process**

**-- Contact Corps for help --**



# CIVIL WORKS BUDGET PROCESS



# KEY CONGRESSIONAL COMMITTEES CIVIL WORKS

## HOUSE

Committee on  
Transportation & Infrastructure

Subcommittee on  
Water Resources & Environment

Committee on  
Appropriations

Subcommittee on  
Energy & Water Development

## SENATE

Committee on  
Environment & Public Works

Subcommittee on Transportation  
and Infrastructure

Committee on  
Appropriations

Subcommittee on  
Energy & Water Development



# **WATER RESOURCES DEVELOPMENT ACT (WRDA)**

- **An act that can start Corps project not in the President's budget**
- **WRDAs have been enacted from 1936 through 2007**
- **Generally Congress enacts a new WRDA ~ every two years**
- **WRDA dry spell from 2001 – 2006**
- **Likelihood of future WRDA bills is uncertain?**



# QUESTIONS & CONTACT INFORMATION

- Craig Conner 415-503-6903  
[craig.s.conner@usace.army.mil](mailto:craig.s.conner@usace.army.mil)
- <http://www.spn.usace.army.mil/>
- <http://www.nfrmp.us/>



The background of the slide is a close-up of the American flag, showing the stars and stripes. Overlaid on the right side is a semi-transparent image of a castle with two prominent towers.

# Readiness Branch San Francisco District

**San Francisco District  
4th Annual Levee  
Workshop 5 May 2011**

Duke Roberts, Chief  
Bijan Nooranbakht, P.E.  
FC&CE PM

# Emergency Manager

- Serves as principle advisor to the District Commander on all matters related to natural and technological disasters, national security emergencies, civil disturbances, terrorism activities, and support to military operations.
- Provides overall management of emergency operations and planning activities.



# Emergency Management Primary Authorities

- PL 84-99, Flood Control and Coastal Emergencies (FC&CE)
- PL 93-288, Stafford Act, National Response Framework (NRF)



# STATE AND LOCAL RESPONSIBILITY

Emergency preparedness and response is primarily a state and local responsibility.



# DISASTER PREPAREDNESS

<b>Planning Activities</b>	<b>Preparation of plans and SOP's for quick and effective response to emergencies</b>
<b>Training and Exercise</b>	<b>Development of and participation in, exercises and training in the intra-agency arena.</b>
<b>Equipment, Facilities, Supplies</b>	<b>Acquisition, rent, utilities and purchases necessary for a fully functional EOC and alternate EOC.</b>
<b>National or Regional Centers of Expertise</b>	<b>Support by the Readiness/Emergency Management National or Regional Centers of Expertise.</b>



# Emergency Operations

<p><b>Response Operations</b></p>	<p><b>EOC Operations, to include field representatives and LNO's in support of emergency activities (All hazard)</b></p> <p><b>Technical assistance (All hazard)</b></p> <p><b>Rescue operations (All hazard)</b></p> <p><b>Flood fight Operations:</b></p> <p><b>Emergency contracting</b></p>
<p><b>After Action Report</b></p>	<p><b>Provides for the preparation and publication of After Action Reports at all levels.</b></p>
<p><b>Post Flood Response</b></p>	<p><b>Response to a Governor's request for assistance following a flood.</b></p>
<p><b>Operational Supplies and Equipment</b></p>	<p><b>Maintenance of equipment and replenishment of supplies used during emergency operations.</b></p>
<p><b>Support from Others</b></p>	<p><b>Support received from other Federal agencies in response to a flood or coastal storm emergency.</b></p>
<p><b>Operational Support</b></p>	<p><b>Support provided by USACE Labs, and non-Corps organizations.</b></p>



# REHABILITATION AND INSPECTION PROGRAM

<b>Rehabilitation Project – Federal FCW</b>	<b>Rehabilitation of active Federal flood control works</b>
<b>Rehabilitation Project – Non-Federal FCW</b>	<b>Rehabilitation of active non-Federal flood control works</b>
<b>Rehabilitation Project – Hurricane/Shore Protection Project Field Investigation</b>	<b>Rehabilitation of eligible Federally authorized and constructed Hurricane/Shore Protection Projects.</b>  <b>This is to conduct the investigation and the preparation of the Project Information Report (PIR) for flood control works</b>
<b>Initial Eligibility Inspections (IEI)</b>	<b>Initial Eligibility Inspection is conducted on an inactive flood control project based on established criteria. Inspection determines if:</b>  <b>the public sponsor is qualified.</b>  <b>the project meets engineering and maintenance criteria</b>
<b>Continuing Eligibility Inspections (CEI)</b>	<b>Periodic inspection of active non-Federal FCWs to ensure the project is being maintained in accordance with USACE criteria.</b>
<b>Interagency Levee Task Force (ITF)</b>	<b>Funding, beyond what FEMA provides via a mission assignment, to manage operations of an ITF</b>



# WATER ASSISTANCE

<b>Emergency Water Supplies (Contaminated Source of Water)</b>	<b>Provide emergency water to a locality.</b>
<b>Drought Assistance</b>	<b>Transportation of water at Federal expense.  Well drilling on a reimbursable basis.</b>
<b>Field Investigations</b>	<b>Project Information Report (PIR) preparation.  Technical assistance.</b>



# ADVANCE MEASURES

<p><b>Advance Measures Assistance</b></p>	<p><b>Preventive work performed due to <i>imminent threat of unusual flooding</i>.</b></p> <p><b>District may provide technical assistance upon receipt of funds from HQUSACE.</b></p> <p><b>Advance Measures projects or direct assistance requires HQUSACE approval.</b></p>
<p><b>Field Investigations</b></p>	<p><b>Investigate eligibility and prepare Project Information Report.</b></p>



# SAN FRANCISCO DISTRICT PURPOSE

- Primarily responsible for responding to Major Natural or Man-Made Disasters within the San Francisco District (AOR) Area of Responsibility.



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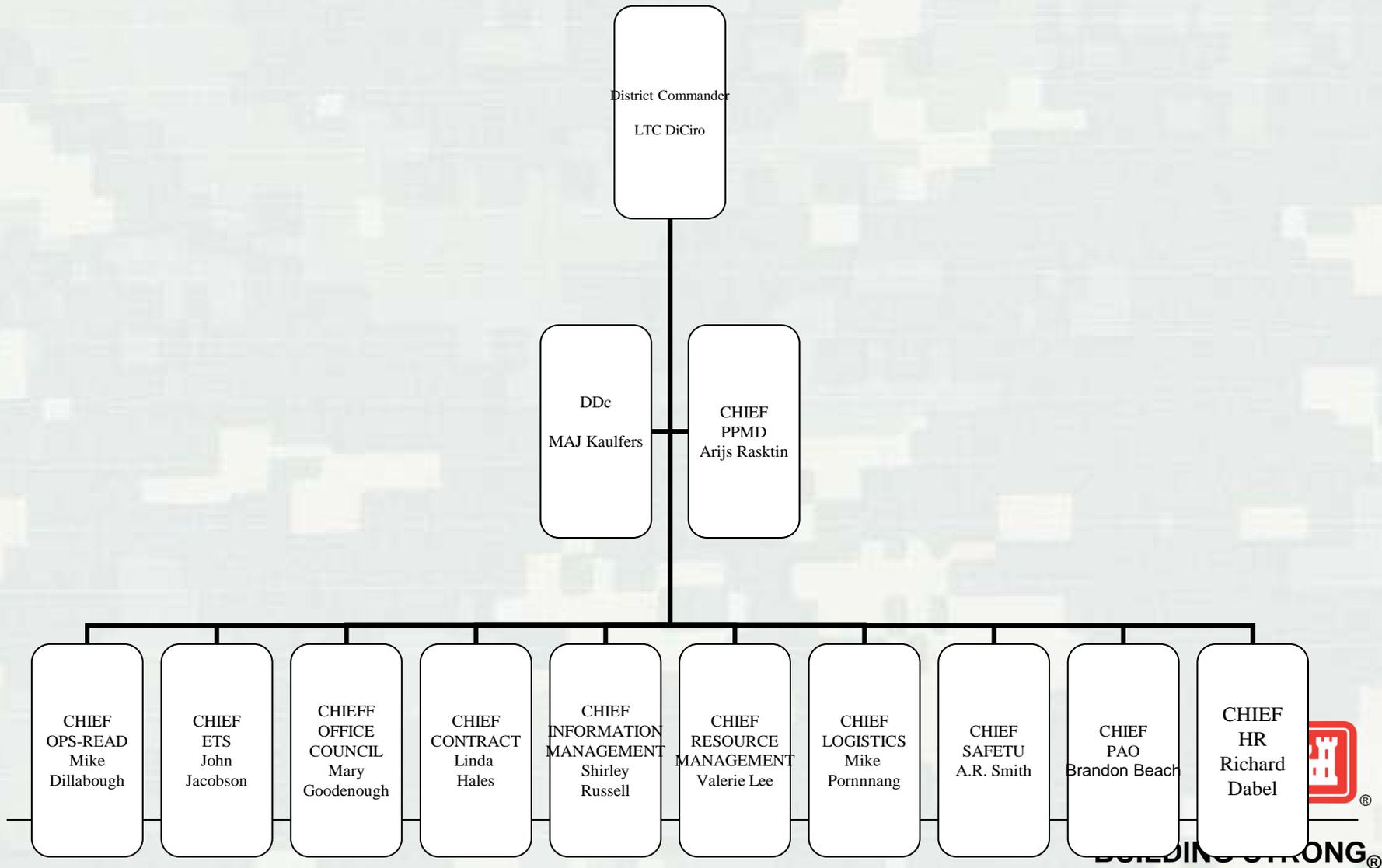
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# San Francisco District

- Organizational structure during a disaster when activated by the DE, DDE or his designated representative:
  - Crisis Management Team – CMT – Senior District Managers
  - Crisis Action Team – (CAT) – Support staffs
  - Emergency Operations Center – EOC – Sausalito, CA
  - Administrative/Logistics Operations Center – ALOC – EM Branch
  - Technical Operations Center (TOC) – ETS Division Personnel
  - Emergency Investigation Team (EIT) – OPS and ETS Division personnel.

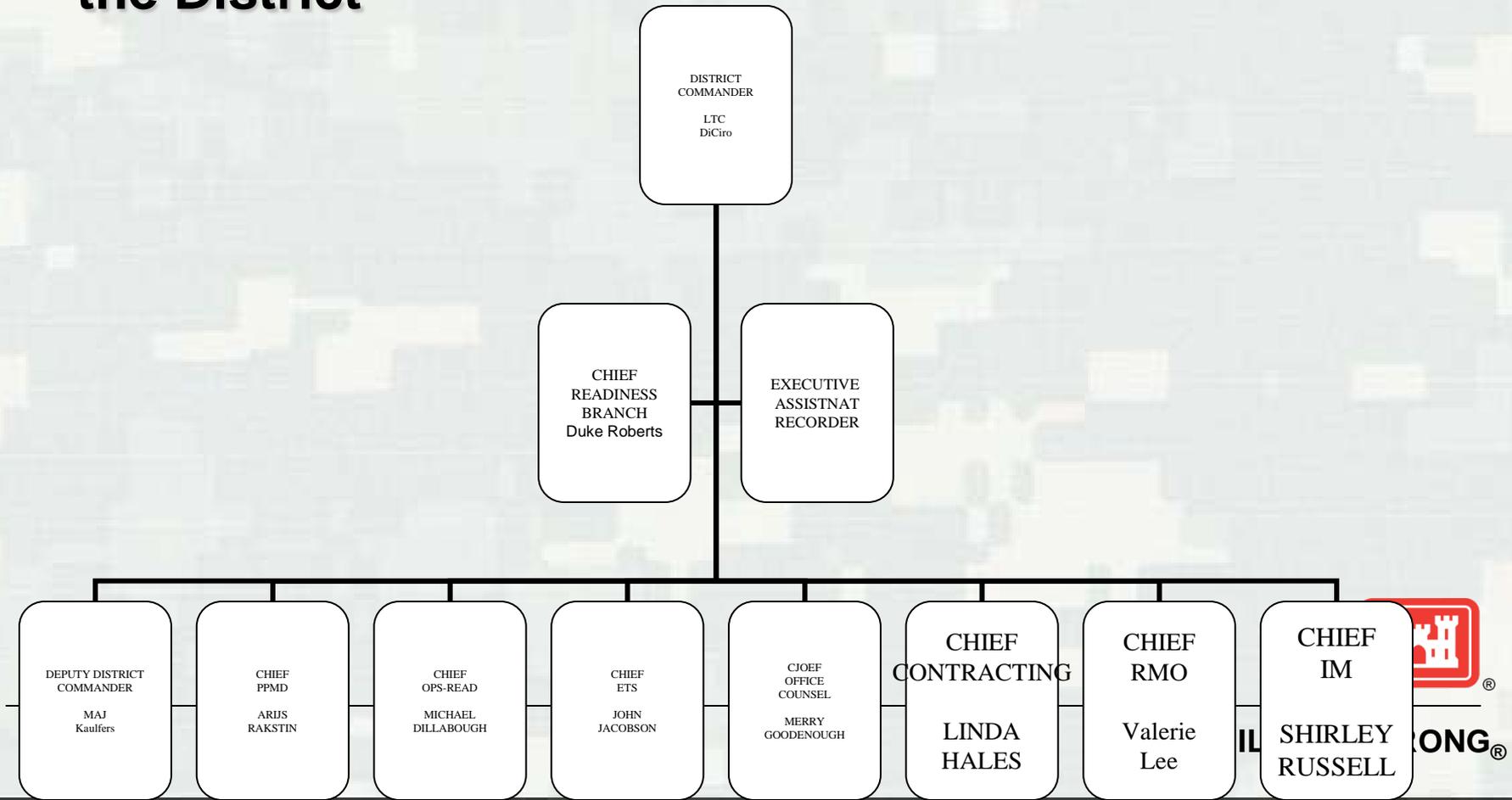


# SAN FRANCISCO DISTRICT COMMAND STRUCTURE



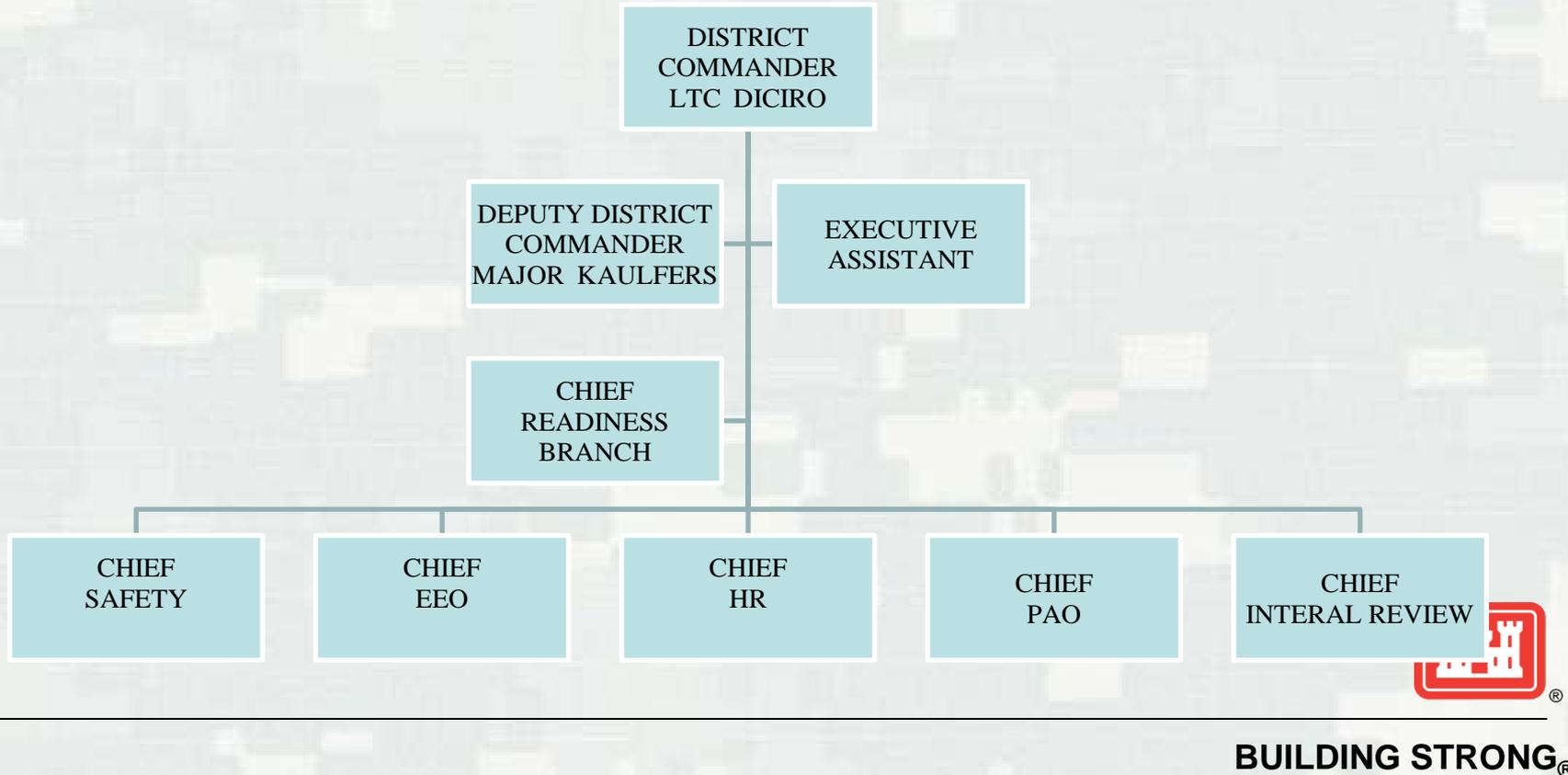
# San Francisco District CMT Crisis Management Team

- These individuals are responsible for directing the assets and resources (funding/non-funding) within the District

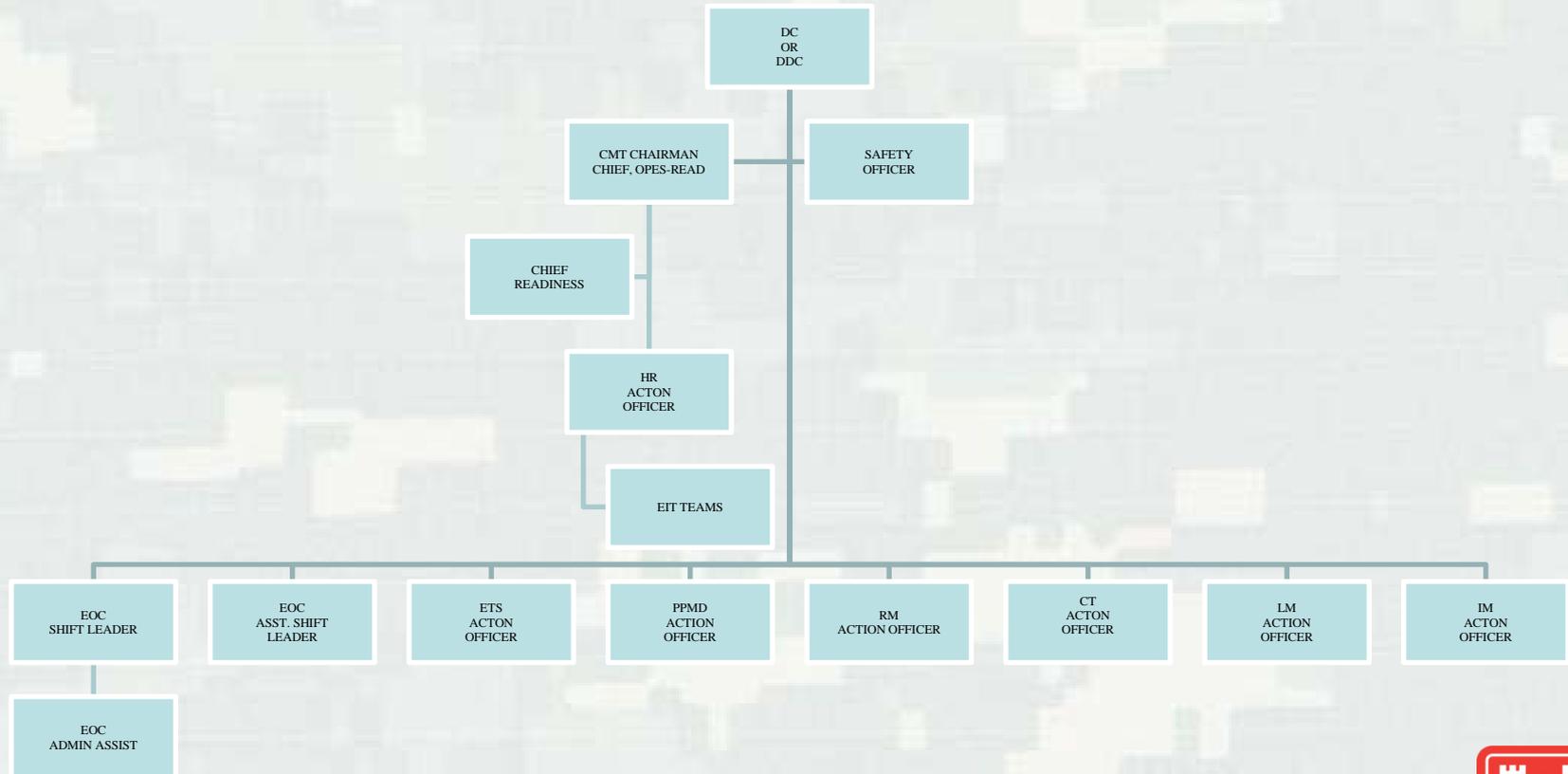


# San Francisco District CAT Crisis Action Team

- These individuals are responsible for providing support functions and roles to CMT and execute the mission assignments



# San Francisco District Emergency Operations Center (EOC) Organization



# **SAN FRANCISCO DISTRICT DUTIES AND RESPONSIBILITIES**

**District Commander – Responsible for declaring a disaster and activating the District EOC.  
Authorized the request for funds from HQUSACE.**

**Deputy District Commander – Assumes command in the event the DE is out of the AOR.**

**Deputy District Commander PPMD – Senior Civilian who assumes command of the District in the event the DE or DDE are not available.**



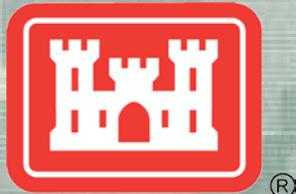


# Inspection of Completed Works (ICW) Program

## John Cheng

Acting ICW Program Manager  
San Francisco District

May 05, 2011



®

US Army Corps of Engineers  
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# ICW PROGRAM: PURPOSE

- **To ensure that non-federal owners of federally-built critical infrastructure, such as a flood damage reduction project, perform essential maintenance in accordance with the project operation and maintenance manuals**



# ICW PROGRAM: AUTHORITY

- **Authorized under Section 221 of the Flood Control Act of 1970 (Public Law 91-611)**
- **Section 221 (e): “The Secretary of the Army, acting through the Chief of Engineers, shall maintain a continuing inventory of agreements and the status of their performance, and shall report thereon annually to the Congress.”**



# **ICW PROGRAM: SAN FRANCISCO DISTRICT**

- **Responsible for budgeting and scheduling inspections of federal projects**
- **Currently evolving to incorporate requirements of the Levee Safety Program**
- **Total of 25 completed, federally authorized, locally operated/maintained flood risk management projects**
- **39 systems inspected**



# **ICW PROGRAM: SAN FRANCISCO DISTRICT**

- **Inspections and risk assessments**
- **PL 84-99 flood fighting and rehabilitation**
- **Project modifications**



# ICW PROGRAM: SCHEDULE (ODD YEARS)

Contra Costa County	Wildcat Creek, San Pablo Creek, <b>Pinole Creek</b> , Rodeo Creek	Second Week in May
Humboldt County	Redwood Creek, Mad River, Eel River	Fourth Week in May
Santa Cruz County	Pajaro River North	Second Week in June
Monterey County	Pajaro River South	Second Week in June
Alameda County	Alameda Creek, San Lorenzo Creek, <b>San Leandro Creek</b>	Fourth Week in June
Del Norte County	Klamath River	Second Week in July
Trinity County	East Weaver Creek	Second Week in July
Marin County	<b>Corte Madera Creek</b>	Fourth Week in July
Vallejo Sanitation	<b>White Slough</b>	Fourth Week in July
Santa Clara Valley	Coyote Creek, Guadalupe River, Uvas Creek	First Week in August
Santa Cruz, City	San Lorenzo River	Third Week in August
Various	Periodic Inspections	Second Week in August, Fourth Week in August, First Week in September

# ICW PROGRAM: SCHEDULE (EVEN YEARS)

Contra Costa County	Wildcat Creek, San Pablo Creek, <b>Rheem Creek</b> , Rodeo Creek	Second Week in May
Humboldt County	Redwood Creek, Mad River, Eel River	Fourth Week in May
Santa Cruz County	Pajaro River North	Second Week in June
Monterey County	Pajaro River South	Second Week in June
Alameda County	Alameda Creek, San Lorenzo Creek	Fourth Week in June
Del Norte County	Klamath River	Second Week in July
Trinity County	East Weaver Creek	Second Week in July
Marin County	<b>Coyote Creek</b>	Fourth Week in July
Santa Clara Valley	Coyote Creek, Guadalupe River, Uvas Creek	First Week in August
Sonoma County	<b>Russian River, Dry Creek</b>	Second Week in August
Mendocino County	<b>Russian River</b>	Second Week in August
Santa Cruz, City	San Lorenzo River	Third Week in August
Various	Periodic Inspections	Fourth Week in August, First Week in September

# ICW PROGRAM: CONTACT INFORMATION

- **(415) 289-3078**
- **john.c.cheng@usace.army.mil**



# Regulatory and Levee Maintenance

## Jane Hicks

Regulatory Division Chief

San Francisco District

(415) 503-6771

[Jane.M.Hicks@usace.army.mil](mailto:Jane.M.Hicks@usace.army.mil)



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San Francisco District

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# AUTHORITIES I

- **Section 404 of the Clean Water Act of 1972**
- **Regulates the discharge of fill in waters of the U. S. including wetlands**



# ORDINARY HIGH WATER

- **33 CFR 328.3(e):...”means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”**



# AUTHORITIES II

- **Section 10 of the Rivers and Harbors Act of 1899**
- **Regulates structures and work in, over, and under navigable waters / plane of mean high water**



# TYPES OF PERMITS I

**No permit required: Work above the ordinary high water mark in non-navigable streams; work in uplands outside of wetlands; work outside “in, over, under” navigable waters.**

**Permits: permit is required for projects that involve 1) the discharge of fill (404) in waters of the US including wetlands or 2) work or structures in navigable waters. (10).**



# TYPES OF PERMITS II

- **Nationwide permits: Sections 404 and 10. For projects with minimal environmental effects. Issued on a national basis. Examples include: maintenance, bank stabilization, maintenance of existing flood control facilities, temporary construction, access, and dewatering, stormwater management facilities.**
- **Regional general permits: Sections 404 and 10. For projects with minimal environmental effects. Issued on a regional basis. Example: stream restoration activities funded by DFG grants.**



# TYPES OF PERMITS III

- **Letters of permission: Section 10 only. For projects with minimal effects on the environment and navigation. Example: single family home boat docks.**
- **Individual permits: Sections 404 and 10. For all other projects.**



# INTERACTIONS WITH OTHER AGENCIES

- **Coordinate with USFWS and NMFS on endangered species issues.**
- **Coordinate with USFWS, EPA and CDFG on wetlands issues.**
- **Coordinate with RWQCB on water quality issues.**
- **Coordinate with SHPO on historic properties issues.**
- **Also coordinate with local governments as needed**



# ACTIVITIES REQUIRED BY LEVEE VEGETATION MANAGEMENT THAT MAY REQUIRE A PERMIT

**Generally activities in wetlands or below OHW/MHW  
that disturb the soil such as:**

- **“by excavation, remove the trunk (or stem), stump, rootball and all roots greater than ½ inch in diameter”**
- **“fill(ing) and compact(ing) the void”**
- **Repair of animal burrows.**



# ACTIVITIES REQUIRED BY LEVEE VEGETATION MANAGEMENT THAT MAY NOT REQUIRE A PERMIT

**Generally activities that don't disturb the soil such as:**

- **Herbicide application**
- **Mowing**
- **Cutting trees**





**CONTACT THE APPROPRIATE  
REGULATORY BRANCH CHIEF TO  
DETERMINE IF YOU NEED  
AUTHORIZATION FOR YOUR ACTIVITY  
BEFORE YOU START WORK!!!!**

**See contact list in your handout.**



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# Questions?



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# Rehabilitation & Inspection Program (RIP)

*Is there any legal relief in sight?*

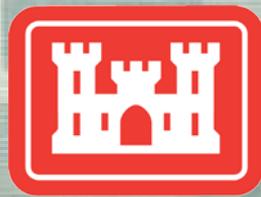
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# Rehabilitation & Inspection Program (RIP)

- **Introduction**

- **Levee vegetation variance**
- **Potential litigation**

- **Administrative recourse**

- **RIP**
- **FOIA**

- **Judicial relief**



# Introduction



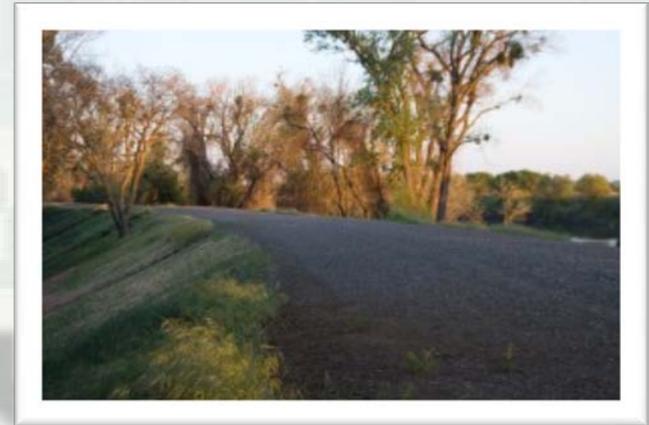
*“...mean old levee taught me to weep and moan.”* -- *When the Levee Breaks*, Led Zeppelin



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# Introduction – Levee vegetation variances

- WRDA 1996, § 202(g)
- ETL 1110-2-571,  
*Guidelines for Vegetation Management*
- PGL draft, *Vegetation Variance Standards*
- California examples



# Introduction – Potential litigation

- **Endangered Species Act**
- **National Environmental Policy Act**
- **Center for Biological Diversity**  
**(8/2/2010)**
- **Muckleshoot Indian Tribe**  
**(2/23/2011)**
- **Friends of the River**  
**(4/19/2011)**



# Administrative recourse



*"If it keep on rainin', the levee gonna break  
Some of these people don't know which road to take."*

*--Levee's Gonna Break, Bob Dylan*



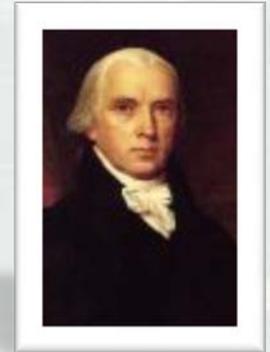
# Administrative recourse – RIP

- EP 500-1-1 rating assessments. 33 C.F.R. § 203.48(e)
  - Acceptable – no work required & function as intended
  - Minimally acceptable – One or more deficient conditions & function as intended
  - Unacceptable – One or more deficient conditions preventing function as designed, intended, or required.
- Unacceptable = Inactive  
= *No rehabilitation assistance*

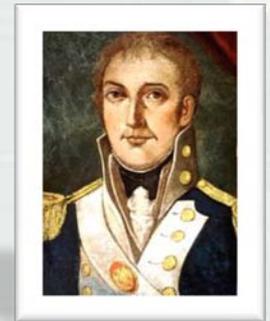


# Administrative recourse – FOIA

- **“A popular government, without popular information, . . . is but a prologue to . . . a tragedy.”**
- **“. . . the right of freely examining public characters . . . Is the only effective guardian of every other right.”**
- **“. . . free investigation was inseparable from representative government and essential to its preservation . . .”**



James Madison



William Claibourne



# Administrative recourse – FOIA, cont.

- **FOIA ensures public has access to federal agency records.**  
**5 U.S.C. § 552a.**
- **Presume disclosure - unless good reason to withhold**
- **New administration guidance – disclosure is presumed (unless harm)**
- **To file a request, visit: <http://www.spn.usace.army.mil/>**



# Administrative recourse – Ratings

- **Inactive status – District notifies state & local emergency management agencies**
- **District provides information to sponsors**
- **Sponsor reclama. 33 C.F.R. § 203.48(f)**
  - **Eligibility disagreements. ER 500-1-1 at 5-5(d)**
  - **Sponsor may provide a detailed engineering study**
  - **Responsible professional engineer preferable**
  - **Right to appeal to Division**
  - **Final decision: USACE HQ**
  - **If Reclama upheld: return to active status**



# Judicial Relief



*“Drove my Chevy to the levee but the levee was dry  
Them good ol' boys were drinkin' whiskey and rye  
And singin' this'll be the day that I die.”*

*--American Pie, Don McLean*



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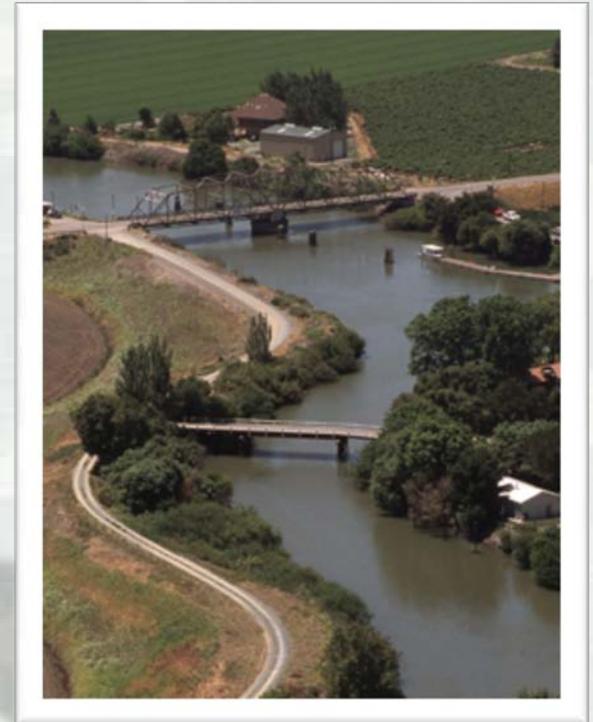
# Judicial relief – Judicial review

- May not make decisions that are arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.  
**APA, 5 U.S.C. § 706 (2)(A)**
- Factual determinations are not final and conclusive unless supported by record.  
***Garvey v. Freeman*, 397 F.2d 600 (10th Cir. 1968)**
- Significant final agency action should be documented by record. ***Kent Farm Co. v. Hills*, 417 F. Supp. 297, (D. D. C. 1976)**
- Administrative decisions are generally decided on the record.



# Sponsor Options – 3 Branches

- **Congressional**
  - **Special legislation**
- **Executive**
  - **Reclama**
  - **FOIA**
- **Judicial**
  - **Litigation**

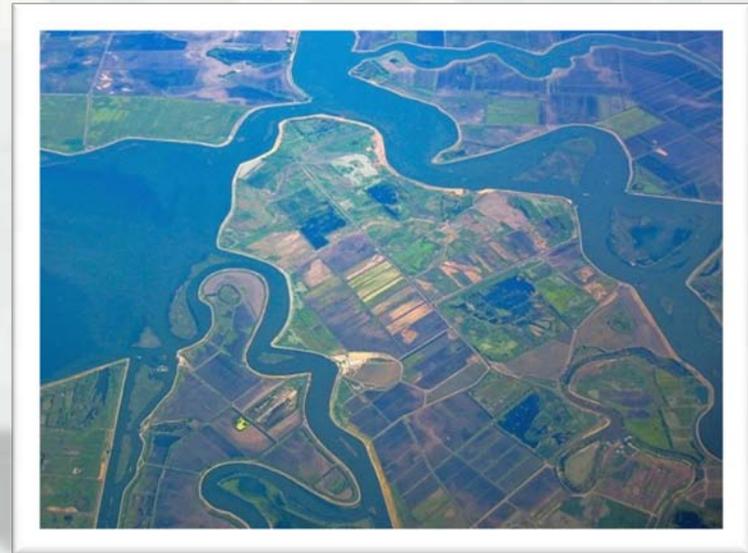




*"I ran down to the levee  
But the Devil caught me there  
He took my twenty dollar bill  
And he vanished in the air"*

*--Friend of the Devil, The Grateful Dead*

# QUESTIONS?



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FEMA

# Treatment of Levees in Flood Insurance Studies

Eric Simmons  
May 5, 2011  
San Rafael, CA

**RiskMAP**  
Increasing Resilience Together



# Discussion Topics

- FEMA and Levees
- NFIP Reform
- Where is FEMA Today
- Spectrum of Levees
- What It Means for Communities
- Questions and Answers

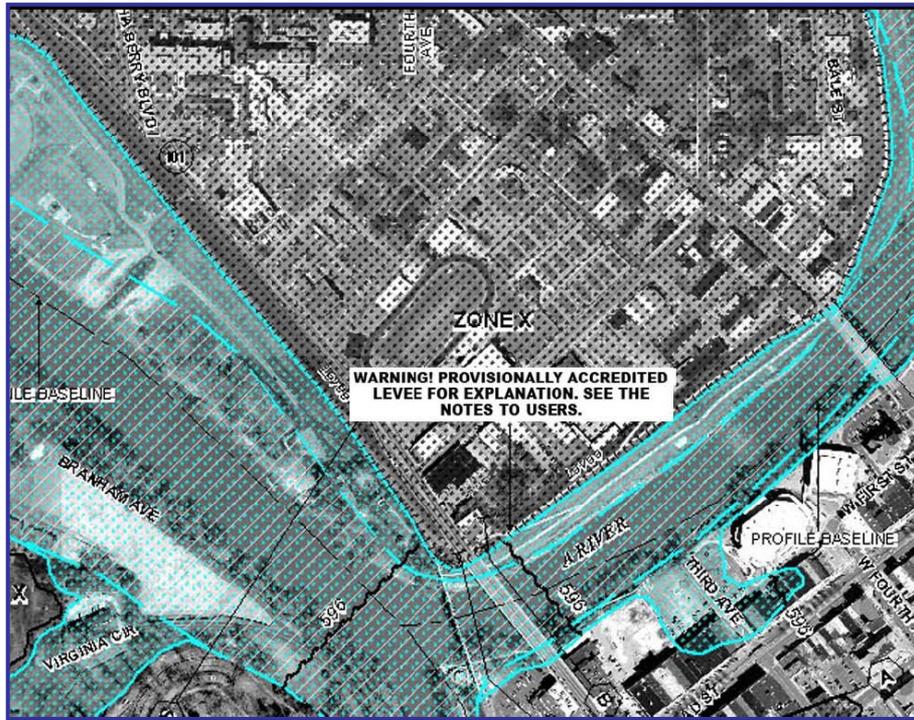
# What is FEMA Doing With Respect to Levees?

- Making sure that levees shown as providing protection on flood maps do in fact provide the stated level of protection – truth in labeling
- Update flood hazard data to reflect existing conditions – not proposed conditions
- Work with states, locals, and other federal agencies to analyze and communicate flood risk
- Help people make sound decisions based on facts

# FEMA Flood Maps and Levees

- Rules for mapping areas protected by levees were codified in Federal Regulation (44 CFR 65.10) in 1986
- Levee must “meet and continue to meet” minimum design, operation, and maintenance criteria consistent with 1% annual chance flood to be accredited
- FEMA’s flood maps generally depict levees as:
  - Accredited – shown as providing protection from base flood (some interior drainage flooding typical)
  - Not-Accredited – shown as not providing protection from base flood

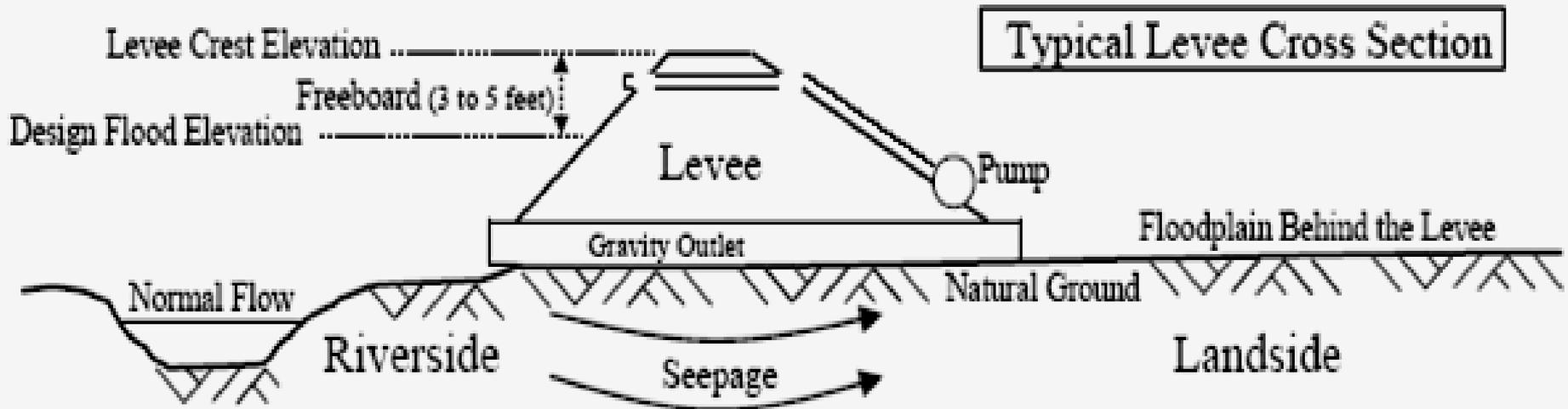
# Accredited vs. Not Accredited



For more info, visit [www.fema.gov/plan/prevent/fhm/lv\\_intro.shtm](http://www.fema.gov/plan/prevent/fhm/lv_intro.shtm)

# 44 Code of Federal Regulations– 65.10

## Anatomy of a Riverine Levee System



# Levee Documentation Criteria

- **Embankment Protection**
- **Slope Stability**
- **Settlement**
- **Interior Drainage**
- **Freeboard**
- **Closure Structure**
- **Other Site Specific Criteria**

# The Call to Reform

- After more than a decade of seeking input, identifying issues, and undergoing studies, FEMA believes that the time has come to undertake a critical review of the NFIP
- With Congress considering reform of the program, FEMA is prepared to assist decision-makers by providing a comprehensive analysis that will both address issues of immediate concern and establish a solid foundation for the NFIP's future
- FEMA began with a NFIP Listening Session in November 2009 and is currently developing a set of policy alternatives to consider in the reform effort

# Anger Due To New Flood Zones



September 10, 2010

## Hundreds of levees no longer reliable

### Ruling means more need flood insurance

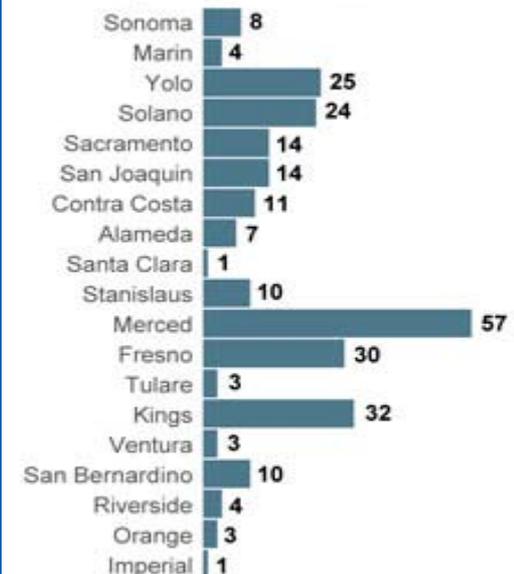
By Peter Eisler  
USA TODAY

WASHINGTON -- The government has determined that hundreds of levees nationwide no longer meet its standards that ensure protection during major floods, a decision that forces thousands of property owners to buy federal flood insurance.

The Federal Emergency Management Agency (FEMA) has revoked its accreditation of the levees as part of an effort to update the government's flood hazard maps, which guide state, local and federal decisions on development in flood-prone areas. Properties protected by the levees now are in flood hazard zones, which means owners who have federally backed mortgages are required by banking laws to carry flood insurance.

The Federal Emergency Management Agency has determined that hundreds of levees are not accredited to protect surrounding communities against major floods. Most of the levees are in California and Arizona.

#### Levees by county in California



#### Levees by county in Arizona



Source: Federal Emergency Management Agency

By Julie Snider, USA TODAY

# Concerns with ‘Without Analyses’

## Main Point in Letters Received by FEMA:

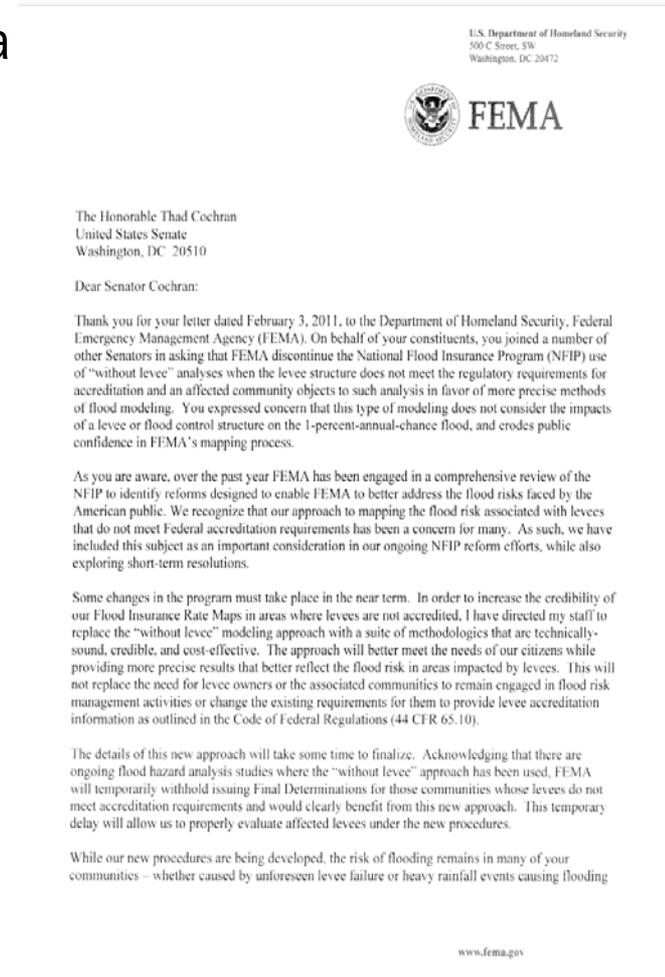
- *We write to urge you...to discontinue the...use of “without levees” analysis...where a final determination has not been made*

## Other Important Points:

- *...we also understand the negative impact the issuance of insufficiently accurate or insufficiently precise flood maps can have on communities at a time of economic uncertainty across our country....*
- *We support FEMA’s efforts to maximize taxpayer dollars by choosing simpler, more cost-effective modeling techniques when appropriate.*
- *...where FEMA treats a flood control structure as if it has been completely wiped off the map, we may be unnecessarily devaluing property and hurting the economies of cities, towns, counties and businesses....*

# FEMA's Response

- FEMA is engaged in NFIP Reform to develop a long-term solution for issues such as these
- FEMA will develop a new approach that includes a suite of methodologies to replace FEMA's "without levee" methodology to provide more precise results
- FEMA will delay issuing Letters of Final Determination to communities whose levees do not meet accreditation criteria (44 CFR 65.10) until the new approach is available
- While new maps may be delayed, flood risk remains in those communities



# Details of Where FEMA Is Today

- FEMA is committed to developing alternative approaches
- We will be looking at the spectrum of levees that were designed and built for flood control



Spectrum of Levees

# Mapping Status of California Levees

- Approximately 93% (12,333 miles) were not designed to, or have not been demonstrated to, satisfy Federal regulatory criteria for protecting against 1% annual chance (base) flood
- Table below presents 5 mapping categories:

Accredited; No PAL		Not Accredited		Currently in PAL		Soon to be Accredited		To be Not Accredited		Total Miles	Total Count
Miles	Count	Miles	Count	Miles	Count	Miles	Count	Miles	Count		
394	164	11,869	7,429	318	249	228	150	464	293	13,273	8,285

Accredited; No PAL – currently accredited on effective FIRM; 65.10 submitted

Not Accredited – currently not recognized as protecting from base flood on effective FIRM; not eligible for provisional accreditation

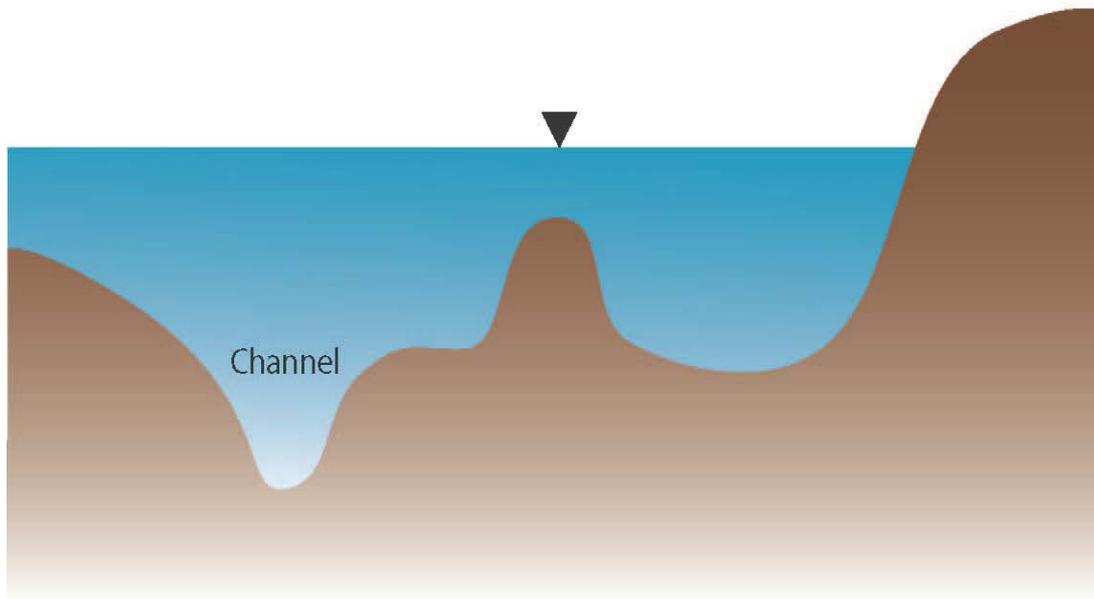
Currently in PAL – currently provisionally accredited on effective FIRM with PAL note or planned for provisional accreditation

Soon to be Accredited – currently provisionally accredited on effective FIRM, 65.10 submitted and PAL note to be removed

To be Not Accredited - currently provisionally accredited on effective FIRM, 65.10 not submitted, and behind levee analysis is to be performed

# Spectrum of Levees

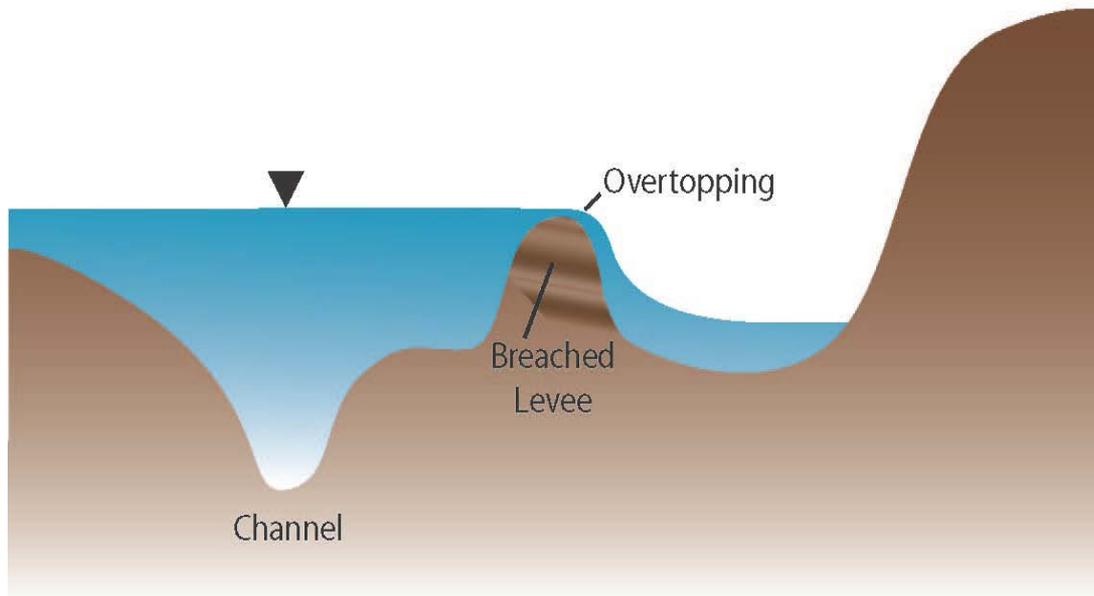
## Levee Not Effective During Major Flood



*Some levees are not effective during large flooding events such as the 1-percent-annual-chance flood, and the flood waters are not impeded by the levee.*

# Spectrum of Levees (cont.)

## Overtopping or Breached Levee



*When the height of water is above the top of the levee, floodwaters will flow over the levee at which point it is overtopped.*

*When a part of the levee breaks/fails, leaving an opening for water to flood the land behind the levee, the levee has been breached.*



# What This Means for Communities

- New approach will provide a more precise option for assessing flooding behind non-accredited levees
- FEMA will temporarily delay issuing Letters of Final Determination for communities whose levees do not meet 44 CFR 65.10
- More precise modeling methods behind levees does not mean the SFHA or estimated base flood elevations will decrease
- Communities behind these levees still have flood risk; while new maps may be delayed FEMA encourages all to continue to manage those risks

# Questions and Answers

- **Q: Are FEMA and the U.S. Army Corps of Engineers aligned in this effort?**

A: Yes. FEMA and USACE have been and will continue to work as a team.

- **Q: What is FEMA doing to improve its analyses behind levees?**

A: FEMA is developing a series of targeted modeling approaches to replace the current “without levee” approach.

- **Q: Will the public be involved?**

A: Yes. FEMA will invite the public to review and comment on the new approach and subsequent guidance.

- **Q: What about maps already in effect?**

A: The new approach will be applied to ongoing and future mapping projects.



**U.S. Army Corps of Engineers**  
**San Francisco District**  
**4th Annual Levee Owners Workshop**

# QUESTIONS ?

**Duke Roberts**

Chief Operations & Readiness Division  
San Francisco District

May 05, 2011

[http://www.spn.usace.army.mil/project\\_programs/levee\\_safety.html](http://www.spn.usace.army.mil/project_programs/levee_safety.html)



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# USACE – SPN: LEVEE WORKSHOP

## CLOSING REMARKS:

Thank you for your attendance & participation

Presentation available at our website

Please Return Home Safely

[http://www.spn.usace.army.mil/project\\_programs/levee\\_safety.html](http://www.spn.usace.army.mil/project_programs/levee_safety.html)

