San Joaquin County
Flood Management Perspectives

FMA Luncheon
February 26th, 2009

Mark Connelly
History of Federal Involvement

**Origins of USACE involvement in San Joaquin County**

- 1911 – part of “The Jackson Report”
- Stockton’s emergence as a commercial navigation hub
- First office established in 1914; part of San Francisco District
- Initial assignment: Sacramento and San Joaquin Valleys

**Sacramento District Beginnings**

- 1926 Report to Congress noted vast amount of work in Delta
- Sacramento District created to oversee efforts in 1929
- 1930 – District began work to solve salinity intrusion into the Delta
- 1935 River & Harbor Act:
  - Stockton Deep Water Channel
  - Central Valley Project
- 17 major study studies completed before Pearl Harbor
  - Lower San Joaquin River and Tributaries
  - Melones Reservoir
  - New Hogan Reservoir
History of Federal Flood Control Involvement

Flood Control Acts of 1936 & 1944

- Act of 1936 – USACE responsible for flood control policy nationwide
- Act of 1944 – authorized raising, lengthening, widening and straightening levees and channels
- During the 1950’s
  - 41 miles of levees were built north of Stockton
  - Existing levees were strengthened south of Stockton
  - Various creeks were outfitted with new levees and channels

Some Recent Examples of Flooding

- 1955 – San Joaquin River, Mormon Slough, Bear Creek
- 1958 – San Joaquin River, Mormon Slough, Bear Creek
- 1986 – Mokelumne River, New Hope Tract & Thornton
- 1997 – San Joaquin River, Tracy & Manteca Area, Stewart Tract
- 2004 – Jones Tract
Thousands Flee as San Joaquin Bursts Levees Near Stockton

COURT Upholds Being Silent on Red Ties

Waters Uncontrolled at Noon as Record Early Rains, High Tide, Brings Deluge

Flooding Event, Levee Breaches

Stockton Record, 1950
Historical Inundation Map 1955 & 1958
1995 FEMA Came to Town

- FEMA identified 10 levees in and around Stockton with freeboard deficiencies
  - Bear Creek
  - North, Middle, and South Paddy Creek
  - Mosher Slough
  - Calaveras River, Diverting Canal, Mormon Slough
  - Potter Creek A & B

- 1995, Draft FIRMs would have placed the City and surrounding County areas in the floodplain
Deficient Levees
COMMUNITY RESPONSE

- In 1995 SJAFCA created as Joint Powers Authority
  - City of Stockton
  - San Joaquin County (SJC)
  - SJC Flood Control and Water Conservation District

- City and County filed appeals; FEMA agreed to delay final FIRMs to allow project construction

- SJAFCA decided to locally fund the design and construction

- Project included in Federal legislation to reimburse Federal Share upon project completion
SJAFCA ASSESSMENT DISTRICT BOUNDARY
SJAFCA PROJECT IMPROVEMENTS

- 40 channel-miles of levee raising and floodwalls
- Modifications to 29 bridges
- Two detention ponds and pump stations
SJAFCA ACCOMPLISHMENTS

❖ In 3 ½ YEARS
  ❖ FORMED Joint Powers Authority (JPA)
  ❖ CREATED ASSESSMENT DISTRICT
  ❖ COMPLETED DESIGN AND ENVIRONMENTAL STUDIES
  ❖ ACQUIRED PERMITS
  ❖ ACQUIRED ROW
  ❖ BUILT PROJECT
    ❖ 19 BID PACKAGES

❖ PROJECT COMPLETED NOVEMBER 1998
The Perfect Storm

**The first wave: 2007-08**
- New Inspection Standards (DWR-State, USACE-Federal)
- FEMA preliminary map release (January 2008)
- Mapping of levee protection zones for 100 & 200 year protection (DWR)

**The second wave: 2008-10**
- Levee geotechnical evaluation reports (2009, we hope!)
- FEMA Maps become effective (October 2009)
- Re-accreditation of “provisional” levees (2009/10)
- Adoption of new federal seepage, vegetation and stability standards (FEMA and USACE)

**The third wave: 2010+**
- New storm runoff and river data
- Climate change considerations
- State Flood Control Plan update
- 200-year protection standards
FEMA on Floodplain Management

- Floodplain management is a decision-making process that aims to achieve the wise use of the nation's floodplains. "Wise use" means both reduced flood losses and protection of the natural resources and function of floodplains.

- Floodplain management is the operation of a community program of corrective and preventative measures for reducing flood damage. These measures take a variety of forms and generally include requirements for zoning, subdivision or building, and special-purpose floodplain ordinances.
FEMA Map Modernization Timeline

- FEMA issues Preliminary Flood Insurance Rate Maps (FIRM’s) and Flood Insurance Study (FIS) – January 15, 2008

- Letter of Final Determination – April 2009

- New Flood Insurance Rate Maps (FIRM’s) scheduled to become effective – October 2009

- Deadline to re-accredit “provisional” levees – (August 2009 – August 2010)
Proactive Community Response

- The Flood Protection TAC has met regularly since May 2006
  - S.J. County, Cities, Reclamation Districts, Development, and Agricultural interests

- A Public Outreach sub-committee formed to develop community information
  - Homeowners, businesses, and the media
  - Flyers, mailers & community meetings
  - Websites:  www.sjgov.org/pubworks
    www.floodsmart.gov
Countywide Impacts

**Light blue** areas are **current** 100-year floodplains (Special Flood Hazard Areas)

**Dark blue** areas are **proposed** new 100-year floodplains

**Yellow** areas are **protected** by provisionally accredited levees (PALs).
Urban Areas affected by FEMA Preliminary 100-Year floodplains (Dark Blue)

FEMA PAL Protected Areas (Yellow)
Calaveras River – Smith Canal

- Calaveras River
- Maintenance
- Deficiencies
- South side levee
- Disaccredited Levees
Central Stockton (Before & After)
Smith Canal Encroachments
Smith Canal
Smith Canal
Smith Canal
Calaveras Levee Encroachments
Calaveras River
Calaveras River
Calaveras River
Calaveras River
Preliminary Floodplain
Twin Creeks - Bear Creek

Bear Creek Maintenance Deficiencies South side levee

Twin Creeks
Twin Creeks (Before & After)
Bear Creek Encroachments
Bear Creek
Bear Creek
Bear Creek
Changes to Preliminary FIRMs Since January 15, 2008 (GOOD NEWS)

- **January 15, 2008**
  - 17,800 Properties in preliminary SFHA.
  - Homes and businesses valued at $2 trillion.

- **November 21, 2008**
  - 12,500 Properties removed from preliminary SFHA.
  - Homes and businesses valued at $1.7 billion removed.

- **Currently (BAD NEWS)**
  - 3,800 Properties remain in preliminary SFHA.
  - Homes and businesses valued at $462 million.

Source: San Joaquin County Community Development Department / San Joaquin County Assessor’s Office, Nov. 2008 Parcel Data
Areas Affected by Provisionally Accredited Levees (PAL’s)

- 38,500 Properties
- Homes and businesses valued at $7.3 billion

Communities Affected:
- Lathrop
- Weston Ranch
- Boggs Tract
- Central Stockton
- Brookside
- Lincoln Village West
- Colonial Heights
- Twin Creeks

Source: San Joaquin County Community Development Department / San Joaquin County Assessor’s Office, Nov. 2008 Parcel Data
FEMA Map Modernization and Levee Deficiency Estimated Timeline

- **December 2007:**
  - Informational Flyers Sent Countywide

- **January 2008:**
  - Preliminary Maps Released (DFIRMS)

- **May 2008:**
  - Preliminary Maps Updated
  - 1,497 Parcels Removed

- **January 2009:**
  - ACOE Briefing Col. Chapman

- **April 2009:**
  - Anticipated Letter of Final Determination on DFIRMS

- **October 2009:**
  - Anticipated DFIRMS Effective Date
  - Poss. 3,860 Parcels added to SFHA

- **August 2009:**
  - PAL Agreements Expire
    - 14 Mile Slough/3924*
    - Rough & Ready/6*
    - RD 2115/2391*
    - RD 17/14087*

- **February 2010:**
  - Media Event
  - Community Flyers Sent
  - Community Outreach Meetings Held

- **November 2008:**
  - Preliminary Maps Updated
  - 12,515 Parcels Removed

- **April-Sep 09:**
  - Expanded Outreach Effort
  - Specific Dates TBD

- **Thru Sep 09:**
  - Opportunity to purchase flood insurance at Grandfathered Rates

- **March 2010:**
  - PAL Agreements Expire
    - Calaveras Rvr N/8728*
    - Calaveras Rvr 5/8544*
    - Walker-Boggs/5482*
    - Atlas Tract/3*
    - Bear Creek/383*

*Number of individual parcels affected by PAL's
Recent Articles of Interest on FEMA’s Map Modernization

- **Stockton Record, February 23, 2009**: Alex Breitler’s article:
  - “Confused At Why It’s That Way? So Are The People Who Live There”

- **Stockton Record, February 25, 2009**: Columnist Michael Fitzgerald’s:
  - “Stockton Flood Maps Only Add to FEMA's Sagging Reputation”
Current Challenges/Next Steps

- **Short-term: maintain/re-establish 100-year flood protection for urban areas**
  - Feasibility Studies
    - Smith Canal & SJ River Levee consultant teams have been selected
  - Development of financing proposals (beneficiary pays)
    - RD 17 passes $30 million bond measure to improve/repair levees

- **Long-term: define/establish 200-year urban flood protection by 2025**
  - Regional Planning processes
    - DWR 100/200-Year Effective Flood Plain Maps (BAM)(LFPZ)
    - General Plan, Zoning and Building Code Updates
    - Development Standard Updates
Lower San Joaquin River Urban Flood Protection
Feasibility Study
Participants
San Joaquin County
SJ AFCA
Stockton
Manteca
Lathrop
Reclamation Districts
Corps of Engineers
Reclamation Board
DWR
San Joaquin County Urban Flood Protection Project (Red Line Project)

San Joaquin County
SJ AFCA
Stockton
Manteca
Lathrop
Reclamation Districts
Corps of Engineers
Reclamation Board
DWR
Questions ?
Smith Canal Closure Conceptualization

Dave Peterson, P.E.
Peterson. Brustad. Inc.
Proposed Modifications

- Inflatable Gate
- Single sheet pile wall
- Dual sheet pile wall, annular space filled with rock
- Gate control station and pump station