Learning from the Past:
Lessons from a Forgotten Flood

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April 16, 2015
Today’s Discussion

What We “Know”
  – You may be surprised

The Story of 1940
  – How it compares to…

Why It Matters Now
  – Thinking about and planning for the future
Those who can not remember the past are condemned to repeat it. - George Santayana
'40  '86  ‘97

Similarities:
- Warm storms
- Lots of precipitation
- Ground already saturated

Differences:
- Pre-reservoirs
- Storm lasted four days
- Storm was a mix of both tropical and artic patterns
- Storm impacted Eel, Russian, Napa, Sacramento, Yuba-Feather and American River basins – almost no impact in the Delta or San Joaquin Valley
- Approximately 35 levee breaks
- The flooding scenario repeated itself one month later on a smaller scale
Rainfall

Rainfall Totals Sacramento River Basin

*Rainfall totals represent the 4 heaviest sequential days of rain*
Rainfall

Rainfall Totals Yuba-Feather River Basin

*Rainfall totals represent the 4 heaviest sequential days of rain*
Rainfall Totals American River Basin

*Rainfall totals represent the 4 heaviest sequential days of rain*
1940 Costs

- 10 deaths
- 781 square miles inundated in the Central Valley
- Total damage estimate $268M ($16M 1940)
- Damage estimate for nine counties on Sacramento River - $223 M ($13.3M 1940)
- Transportation infrastructure - $21.26M ($1.267M 1940)
1940 Flood Inundation
1986 Floodways and Inundation

- 1940 Inundation
- 1986 Inundation
1997 Floodways and Inundation

- 1940 Inundation
- 1986 Inundation
- 1997 Inundation
1940 Flood Inundation Zones

1940 Inundation Zone

Levee Flood Protection Zone
What’s at Risk?

- 373,313 – 1940 population of nine Sacramento River counties
- 2,638,641 – 2010 population of nine Sacramento River counties
- Sacramento International Airport – completed 1967
- Interstate 5 – completed 1960s–1970s
- Interstate 80 – completed 1970s
1940 Flood Inundation Along Sacramento River
1940 Flood Inundation Zones

- Butte County – 222,000
- Woodland – 55,468
- Davis – 65,622
- Solano County – 413,344
- Sacramento – 466,488

Note: 2010 population numbers
Questions?
Questions?
Questions?
Questions?