

# Surface Water Availability

Update

July 10, 2013



# Kemp-Diversion

## Last Meeting

- TWDB-USACE Study on Lake Kemp
  - Differences in inflows between WAM and calculated inflows
  - Affected future yields under future sediment conditions
- Reviewing study and updating reliable supplies
  - Results at next meeting

# Kemp-Diversion

- Updated WAM inflows for Kemp/Diversion based on USACE data
  - Increased firm yield from 101,000 af/y to 123,900 af/y; increase of about 23,000 af/y
  - Safe yield increased by 30,000 af/y
  - Result of change in hydrology in 1950s
- WAM hydrology: 1948-1998
  - Record low inflows in recent years
  - Current capacity – 28% of conservation

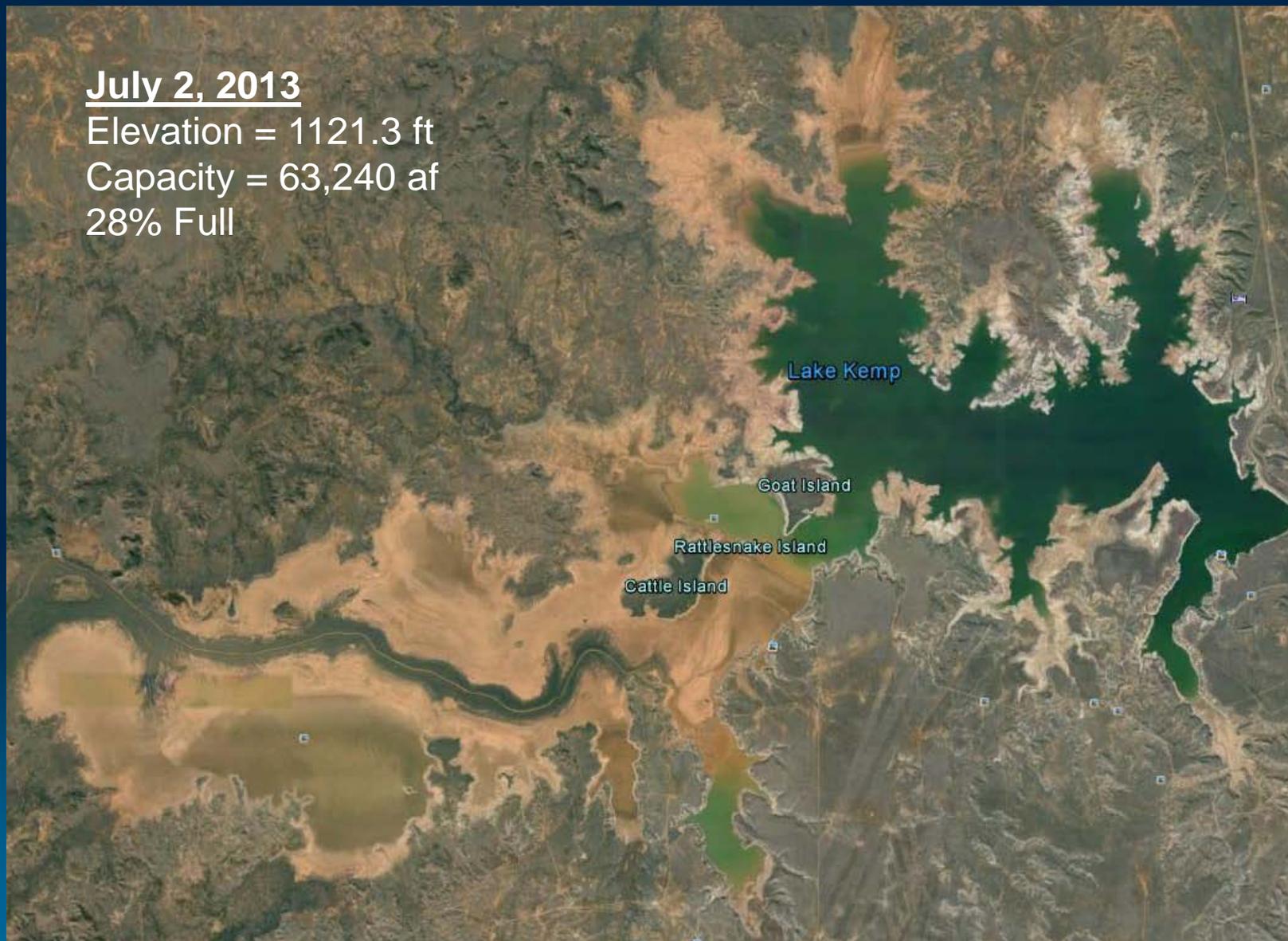
# Lake Kemp – 2013

July 2, 2013

Elevation = 1121.3 ft

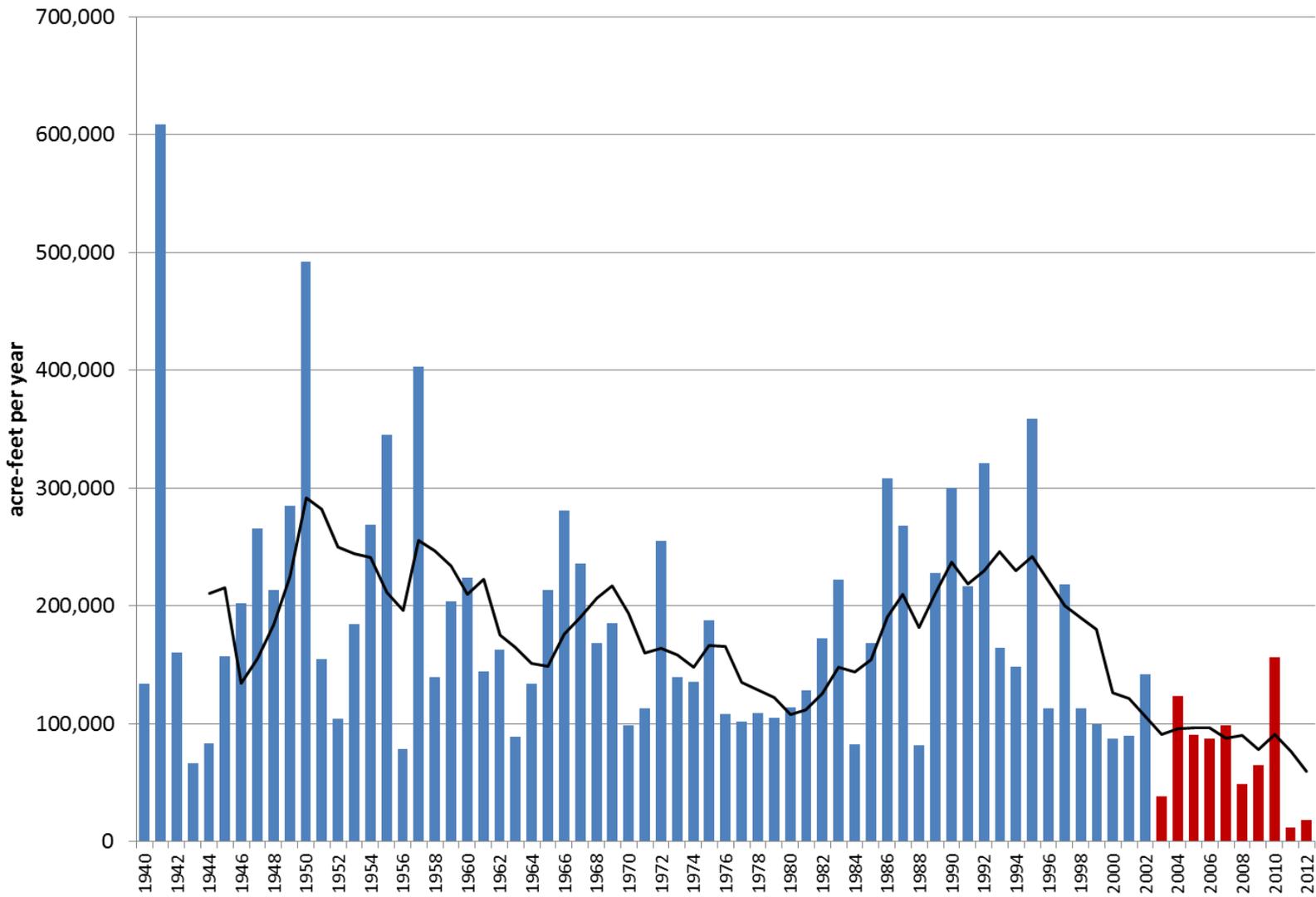
Capacity = 63,240 af

28% Full



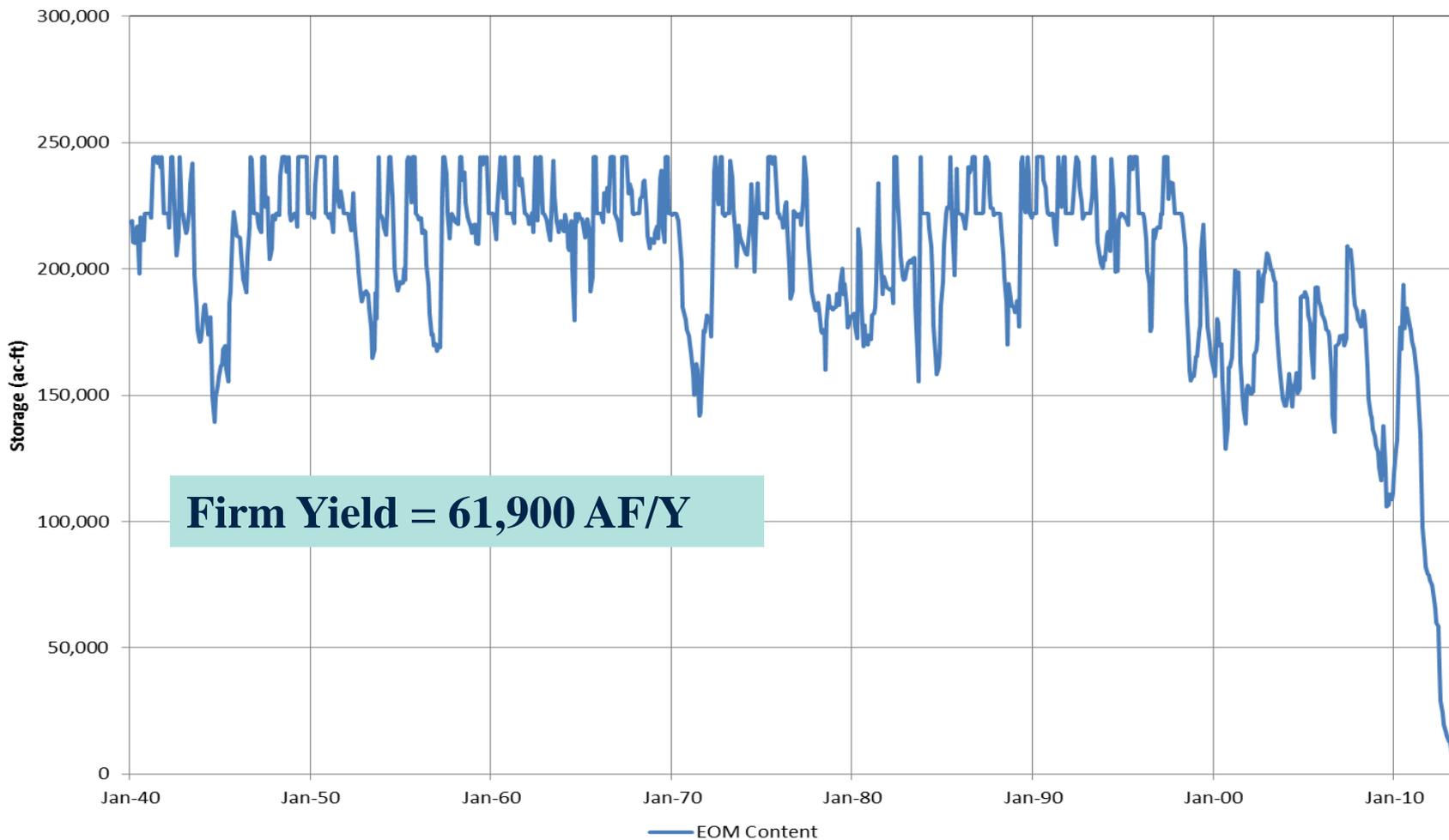
# Lake Kemp Inflows

## Annual Inflows to Lake Kemp



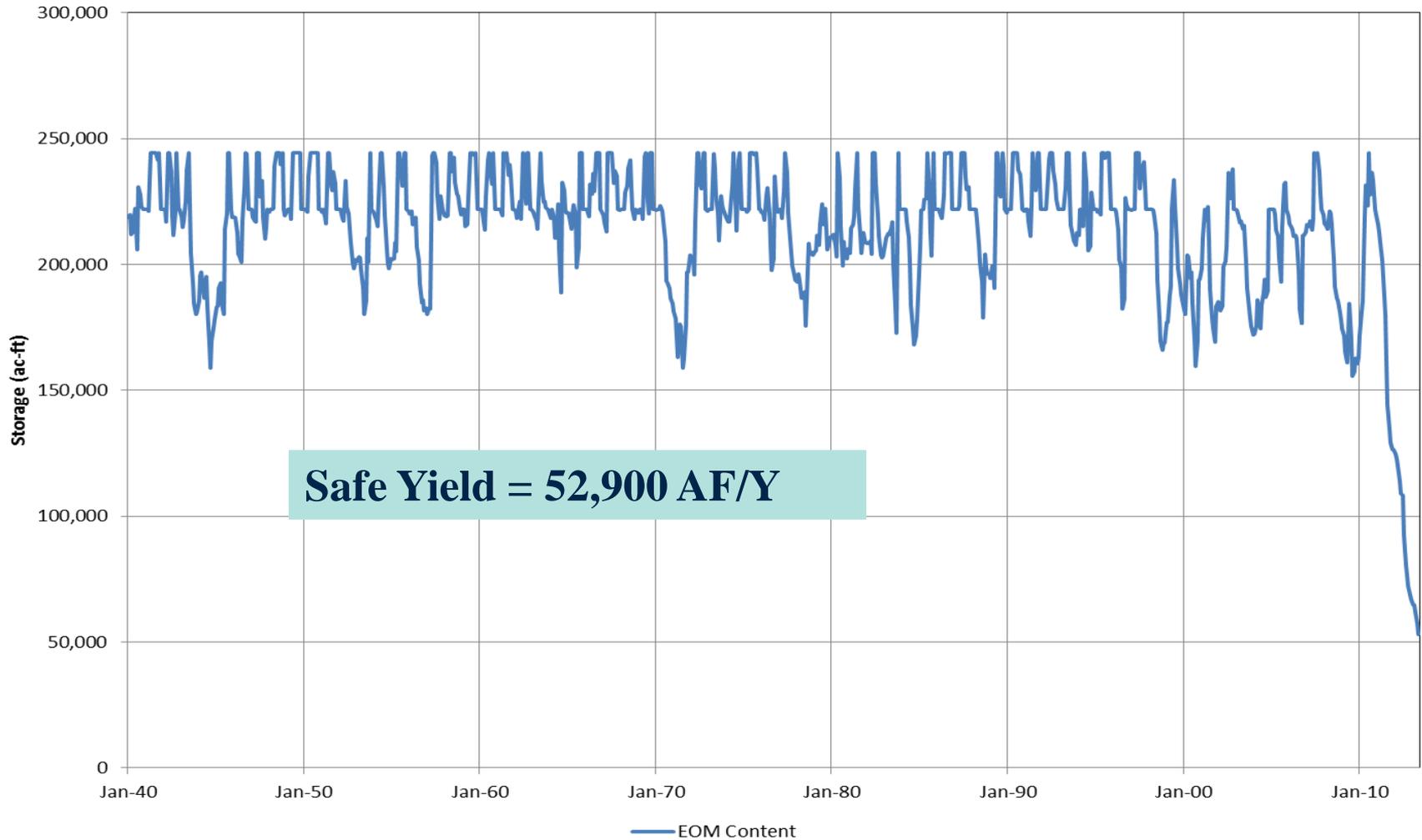
# Reservoir Yield

## Storage Content



# Reservoir Yield

## Storage Content



# Lake Kemp

## ➤ Low Content:

- Water Quality Concerns
- Accessibility Issues with upstream storage
- <50,000 AF – Wichita Falls

## ➤ Drought of record is on-going

- Yield is likely less
- Inflows appear to be less over past decade



# Future Inflow Assumptions

- Repeat of Last 2 Years Inflow (2011-2012)
  - Firm Yield = 41,700 AF/Y
  - 33% reduction in yield
- Repeat of Last 10 Years Inflow (2002-2012)
  - Firm Yield = 61,100 AF/Y
  - Slight reduction

# Surface Water Availability

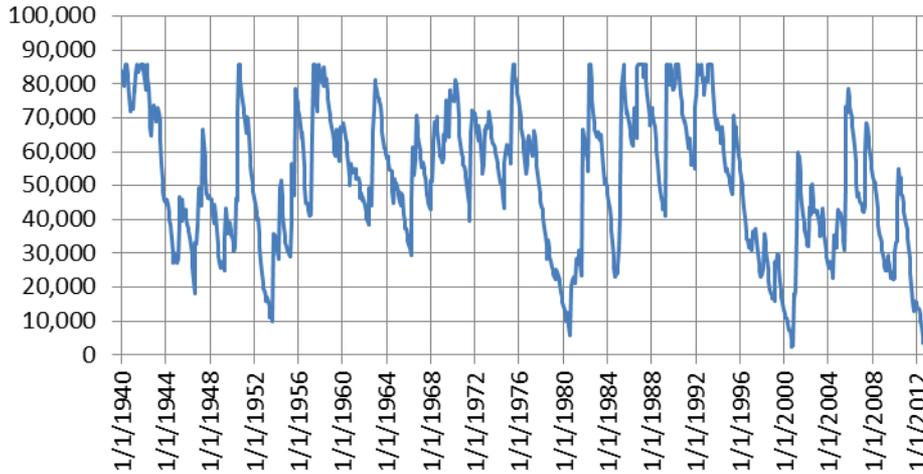
## Other Reservoirs

- Greenbelt
  - Continues to have record low inflows
  - Capacity – 5,647 AF (10.5%)
- Wichita System (Kickapoo/Arrowhead)
  - Drought restriction
  - Combined capacity – 35%



# Wichita System Reservoir Yield

## Lake Kickapoo



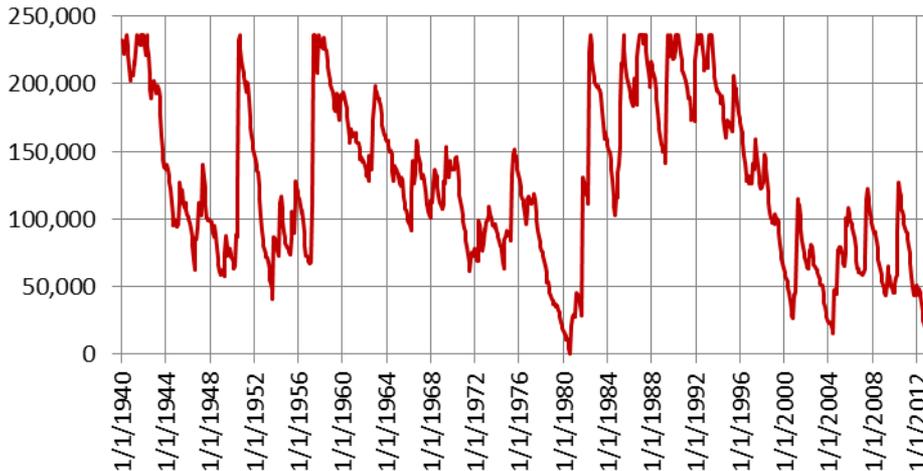
**2011 Region B Plan:**

**2010**

**Firm Yield = 45,800 AF/Y**

**Safe Yield = 34,900 AF/Y**

## Lake Arrowhead



May be entering new  
drought of record