



Stormwater Capture and Flows to the Ocean

Conservation and Local Resources Committee
Item #4b
January 9, 2018

Stormwater in the Metropolitan Service Area



15.2 inches
8.7 MAF



Groundwater
Recharge



Active
325 TAF



Passive
745 TAF

Evapotranspiration
7.2 MAF



Runoff to
Ocean

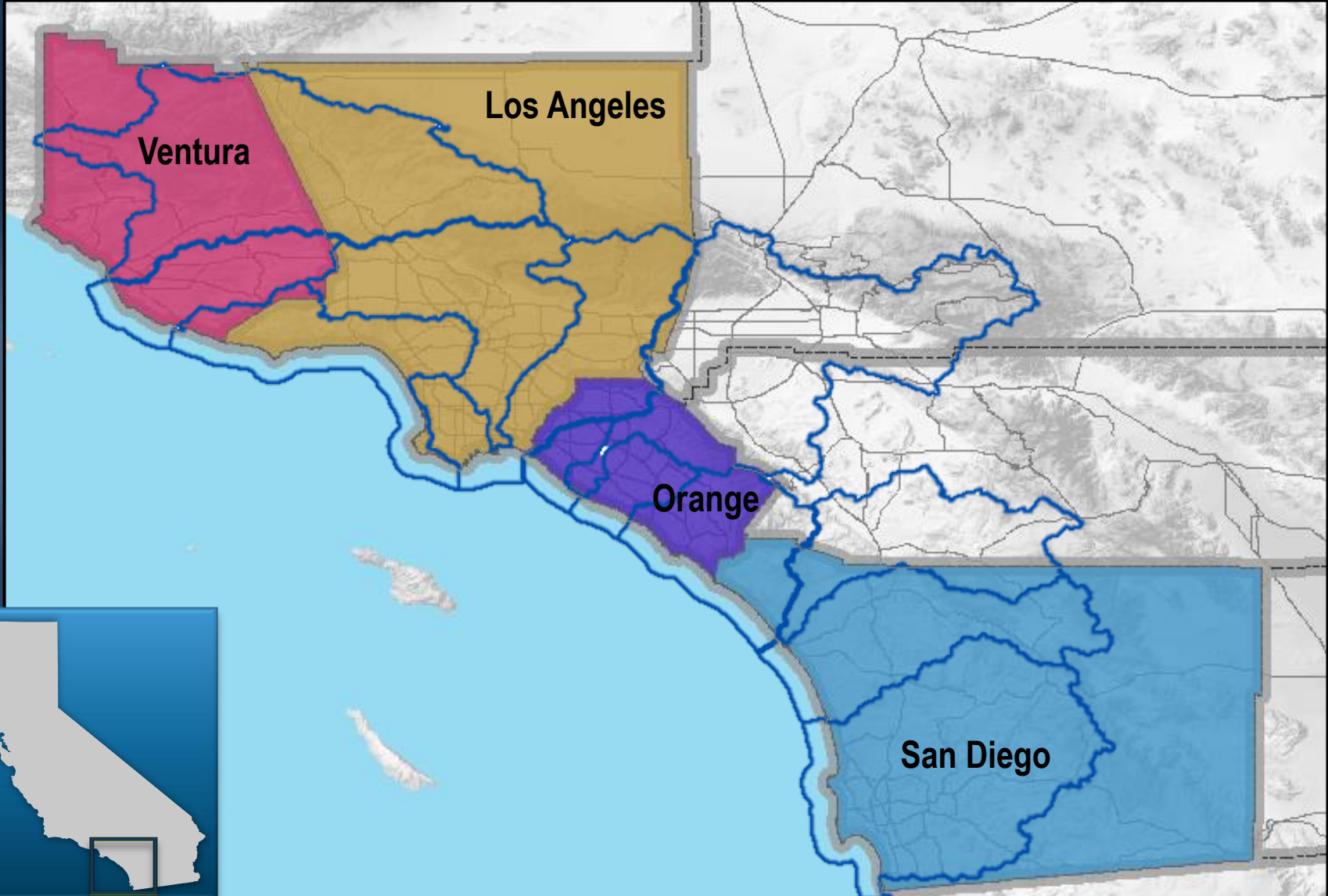


95%
used



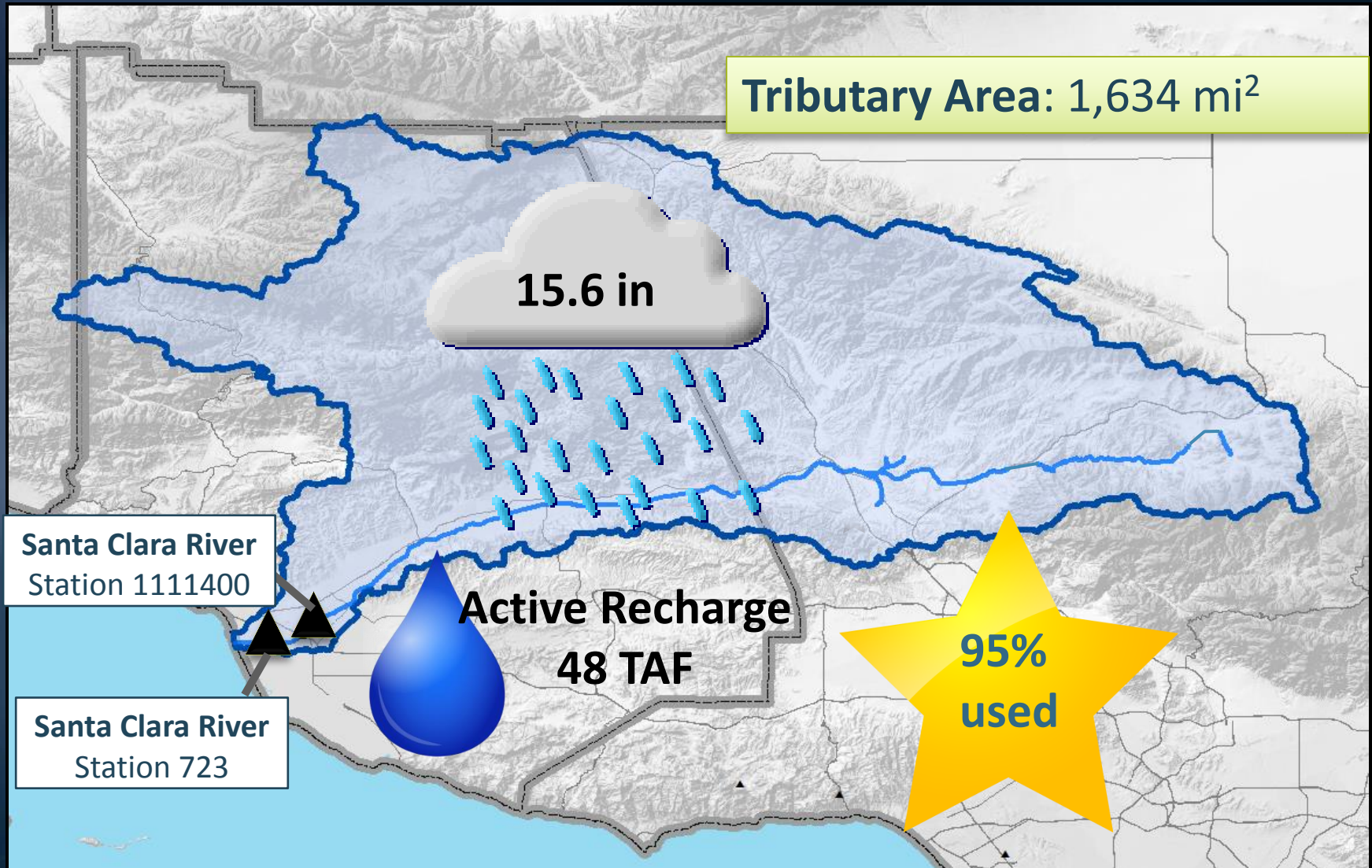
Overview

Watersheds in the Service Area



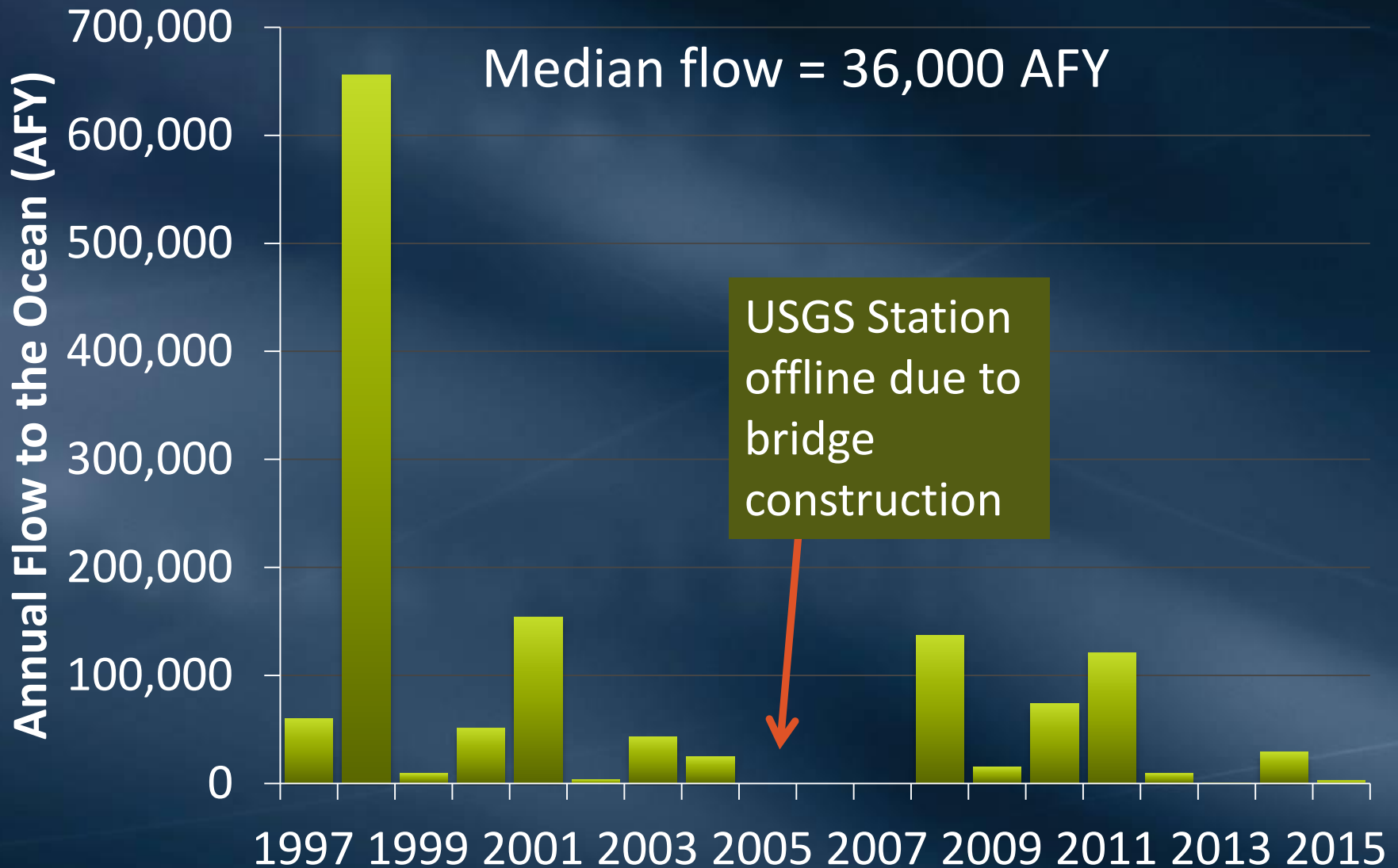
Santa Clara River Watershed

Santa Clara River Watershed Extends into 3 counties



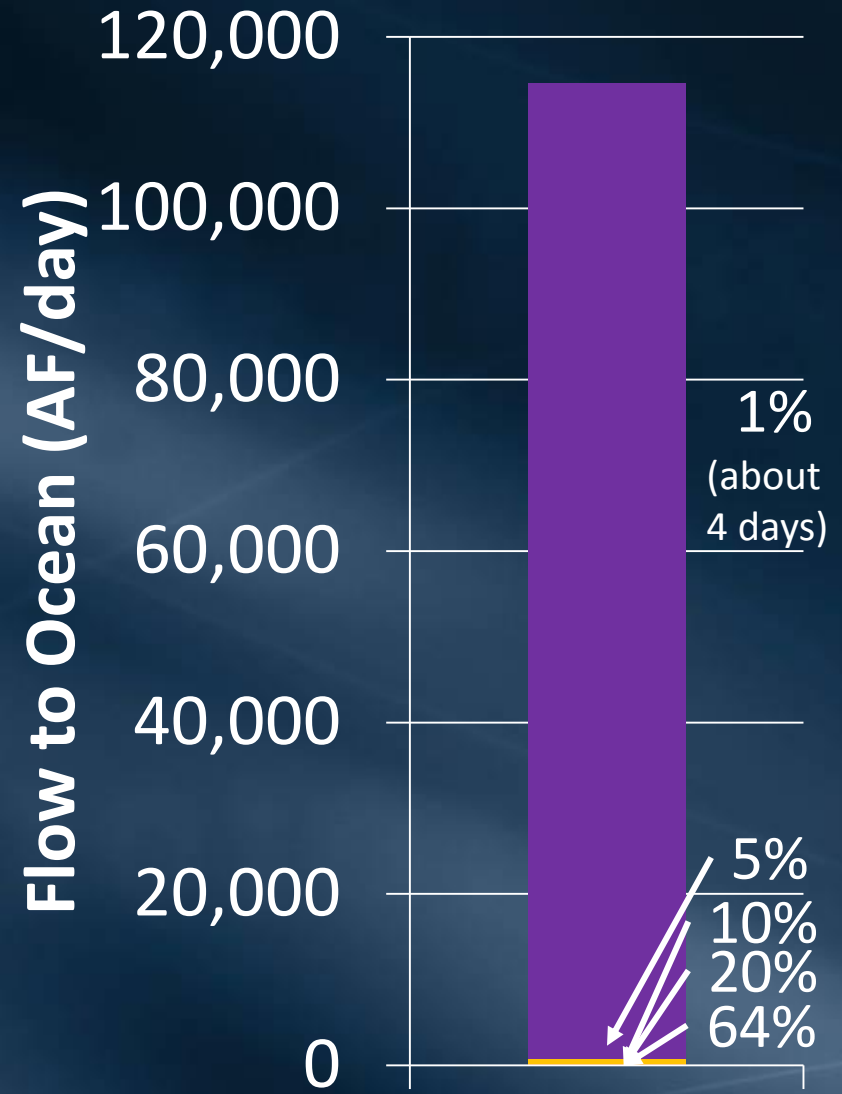
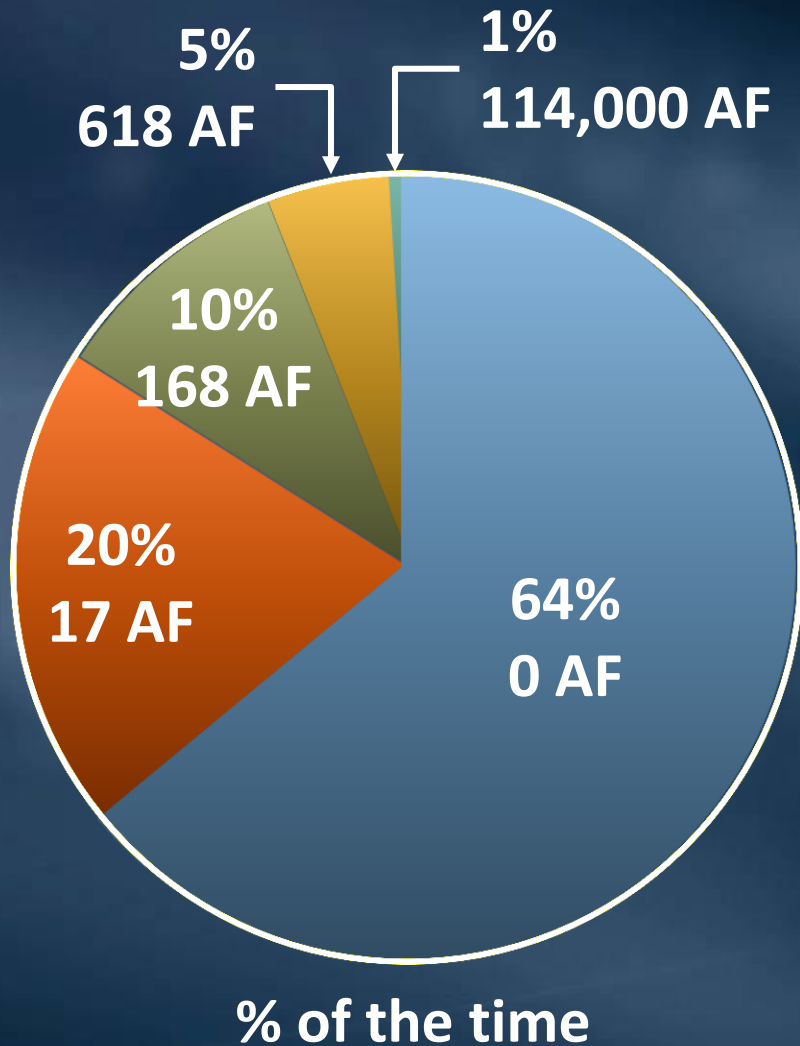
Santa Clara River Flows to Ocean

Ranges from 0-650 TAFY



Santa Clara River

No flow 64% of the time



Los Angeles County Watersheds

Santa Monica Bay, LA River, and San Gabriel River



Active Recharge
196 TAF

15.7 in

Tributary Areas:

Santa Monica Bay: 385 mi²

Los Angeles River: 834 mi²

San Gabriel River: 689 mi²

Topanga Creek
Station F54C-R

Malibu Creek
Station F130-R

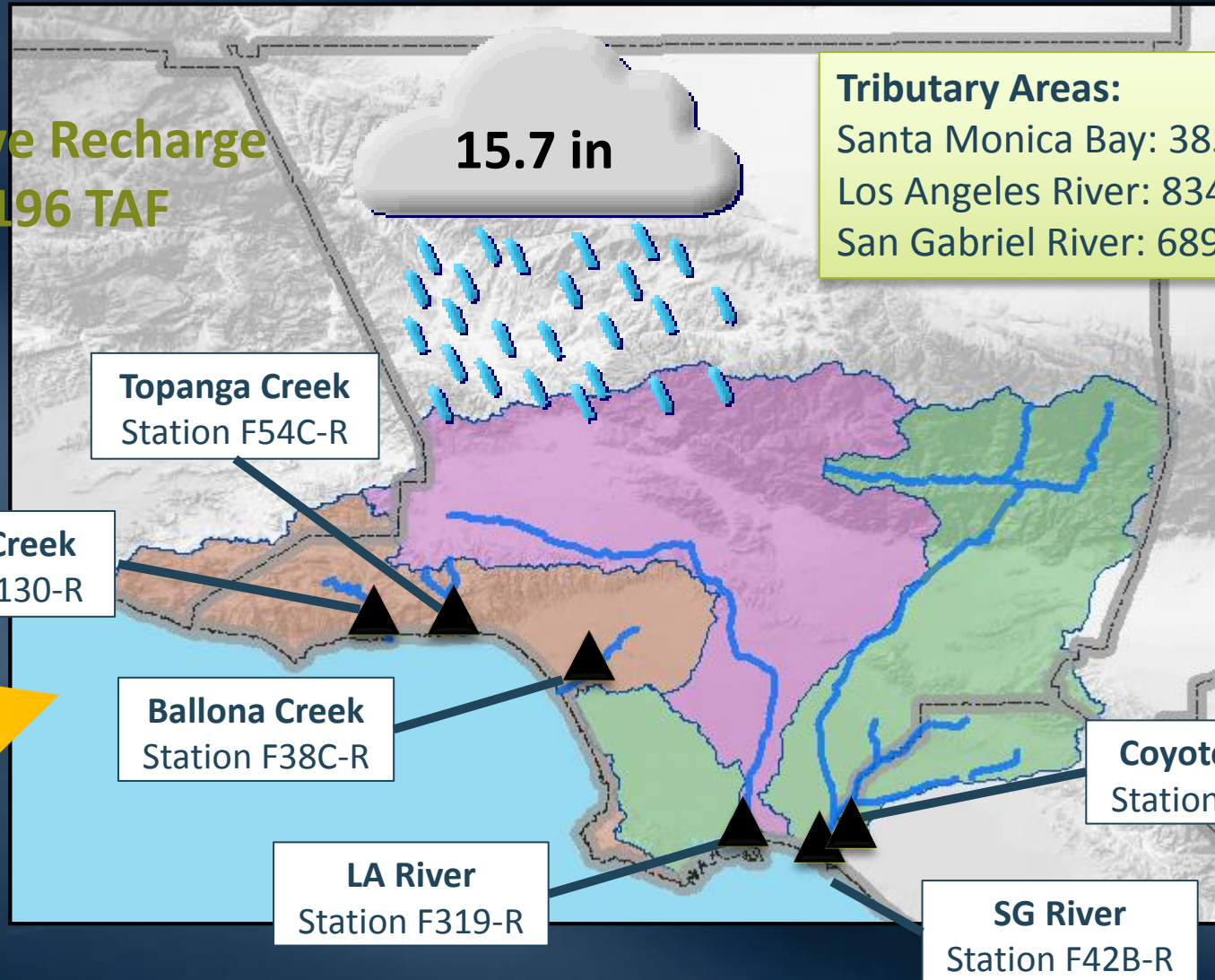
88%
used

Ballona Creek
Station F38C-R

LA River
Station F319-R

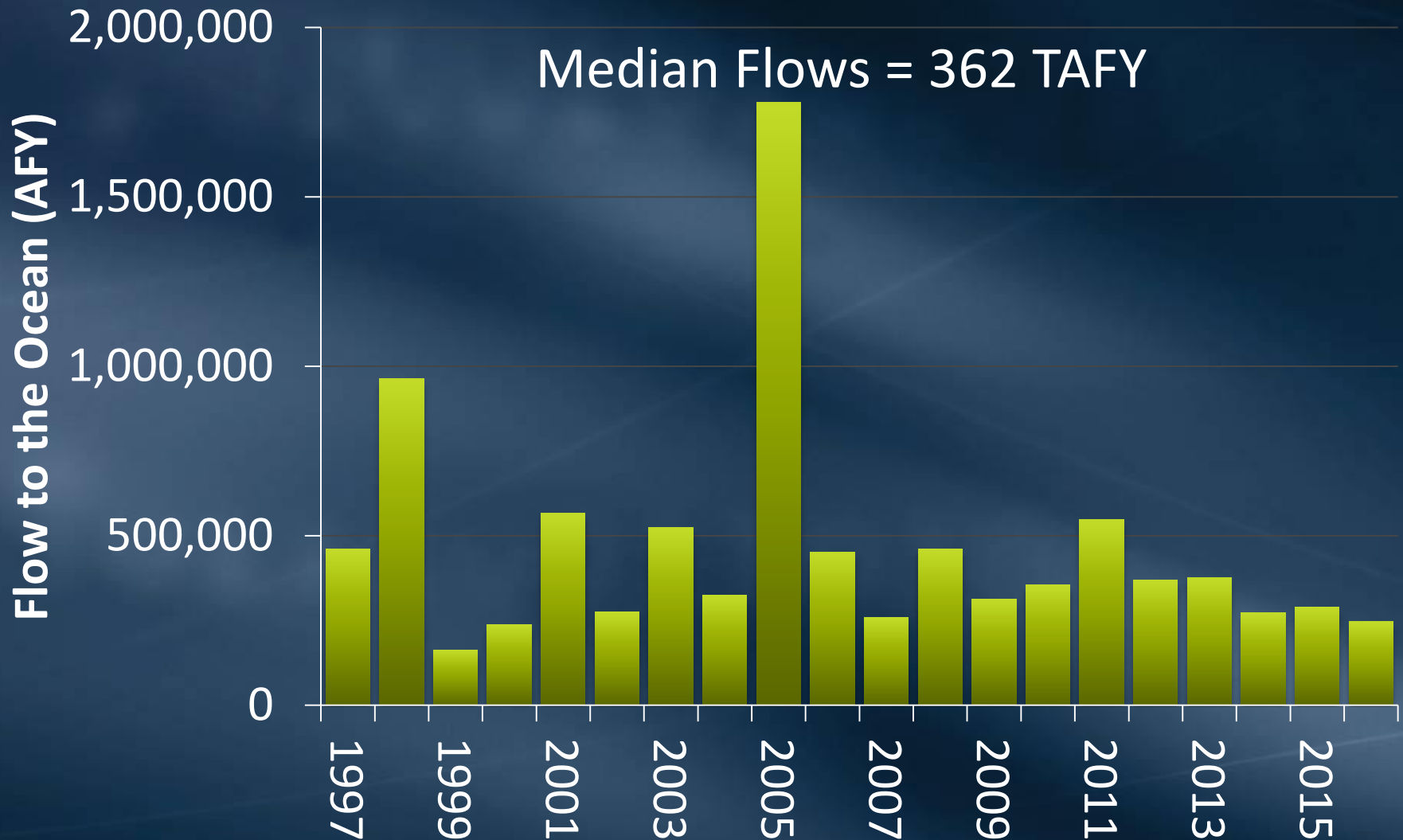
Coyote Creek
Station F354-R

SG River
Station F42B-R



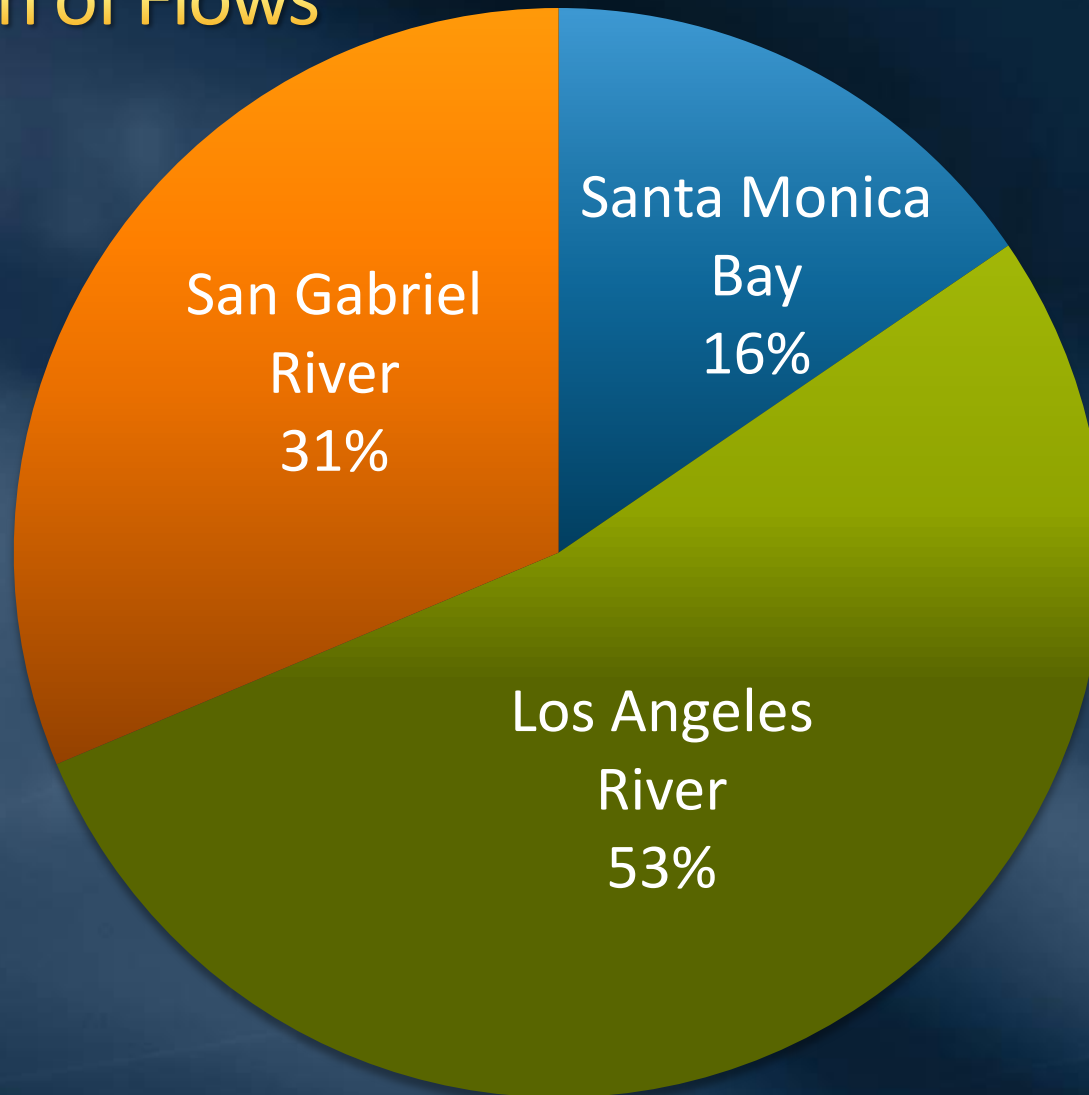
Los Angeles County Flows to Ocean

Ranges from 162 TAF to 1.7 MAF per year



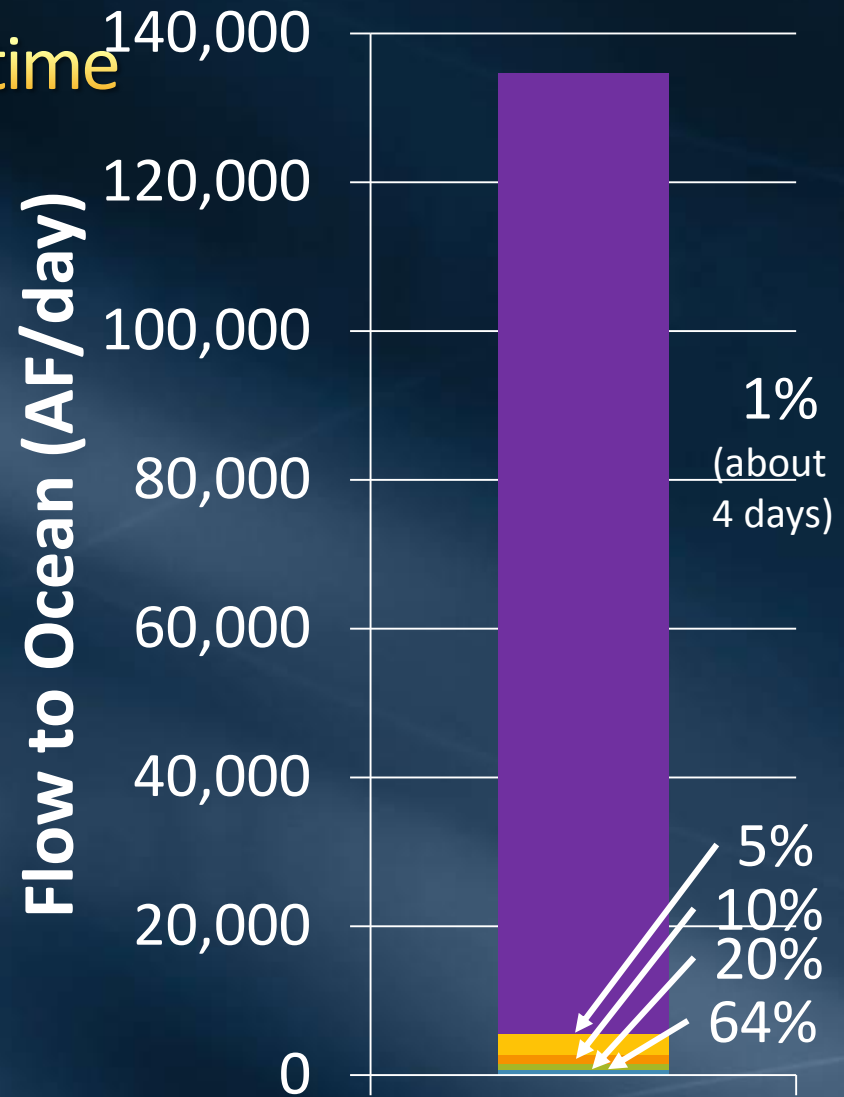
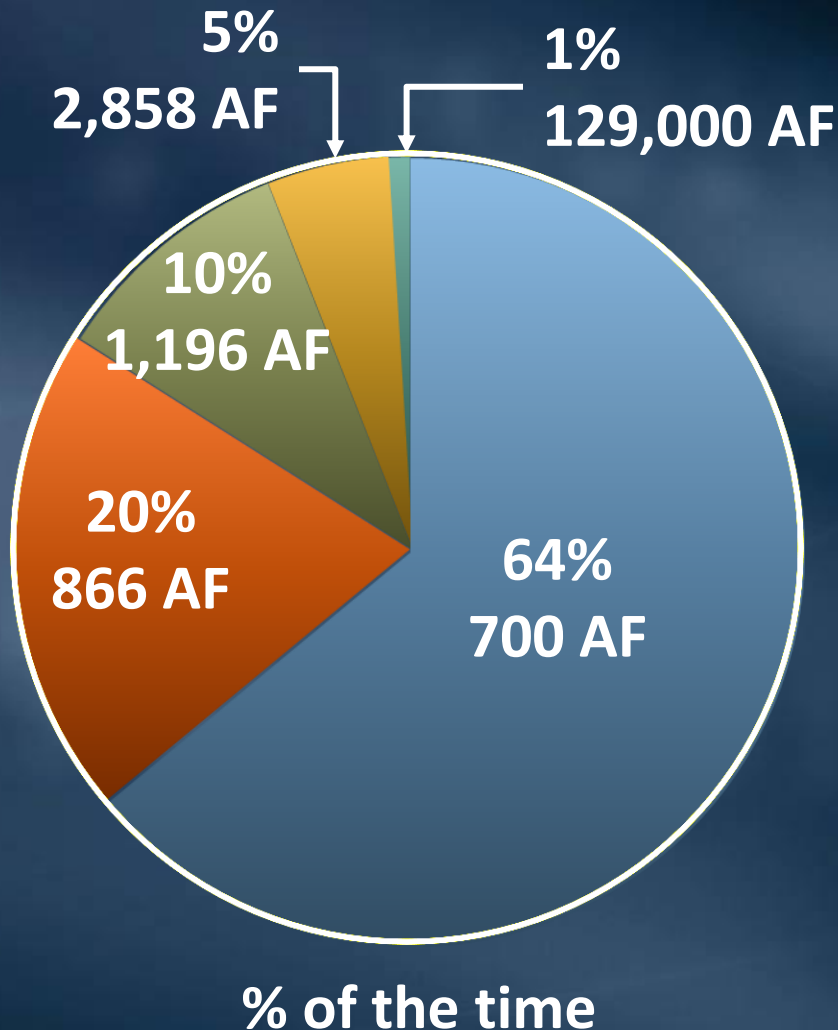
Los Angeles County Flows to Ocean

Distribution of Flows



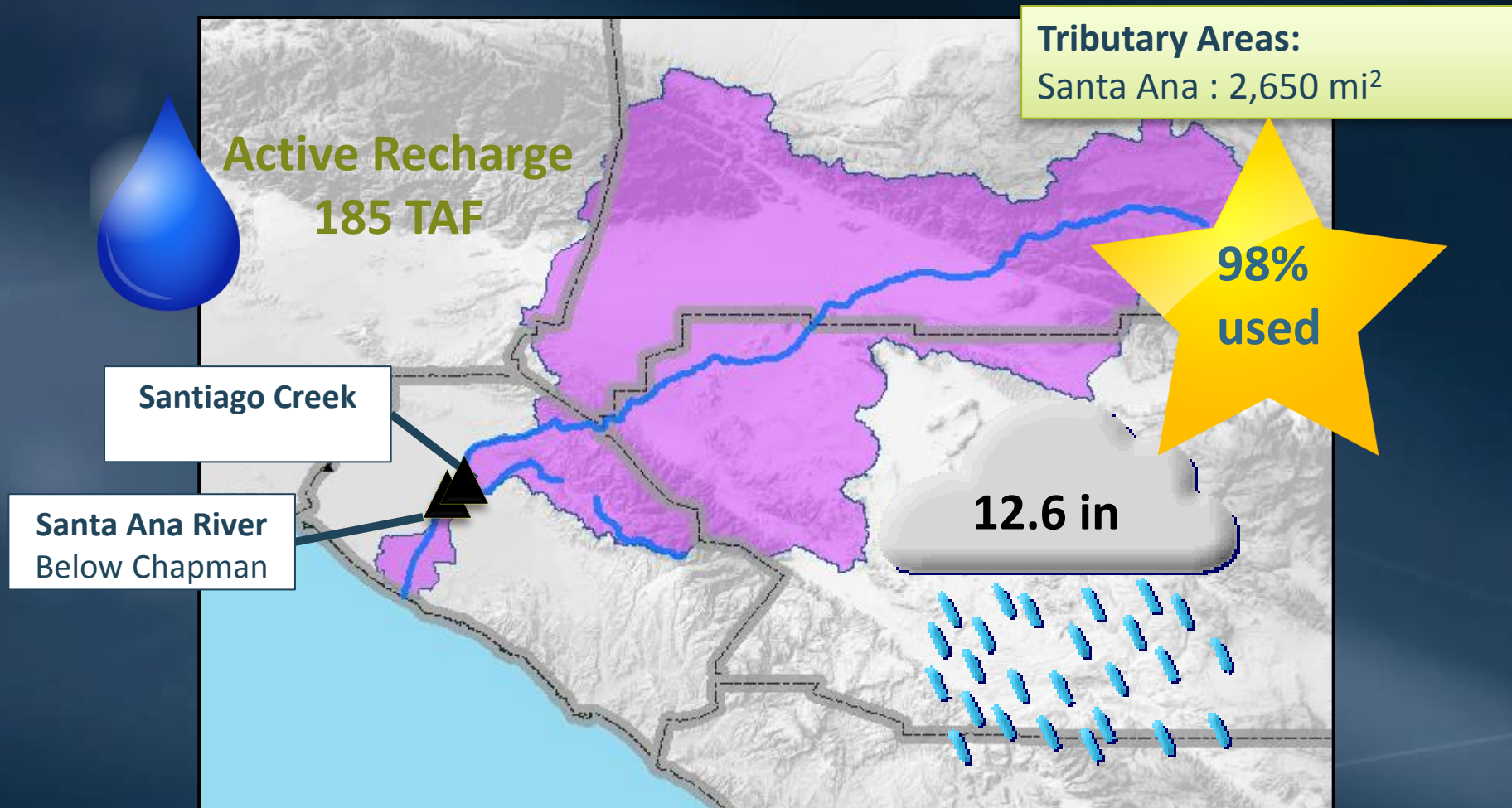
LA County

Minimum of 700 AF 64% of the time



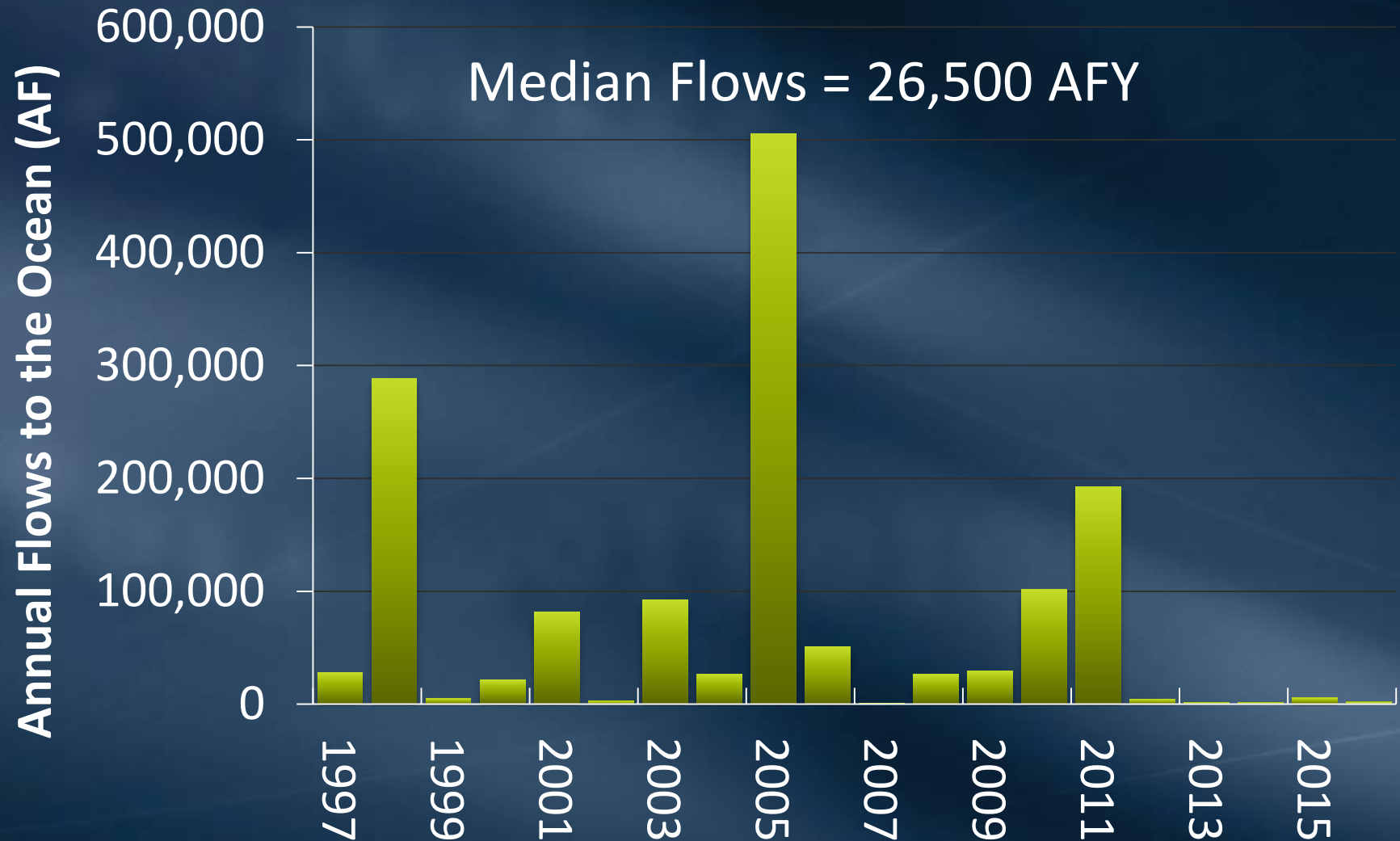
Santa Ana River Watershed

Watershed extends into four counties



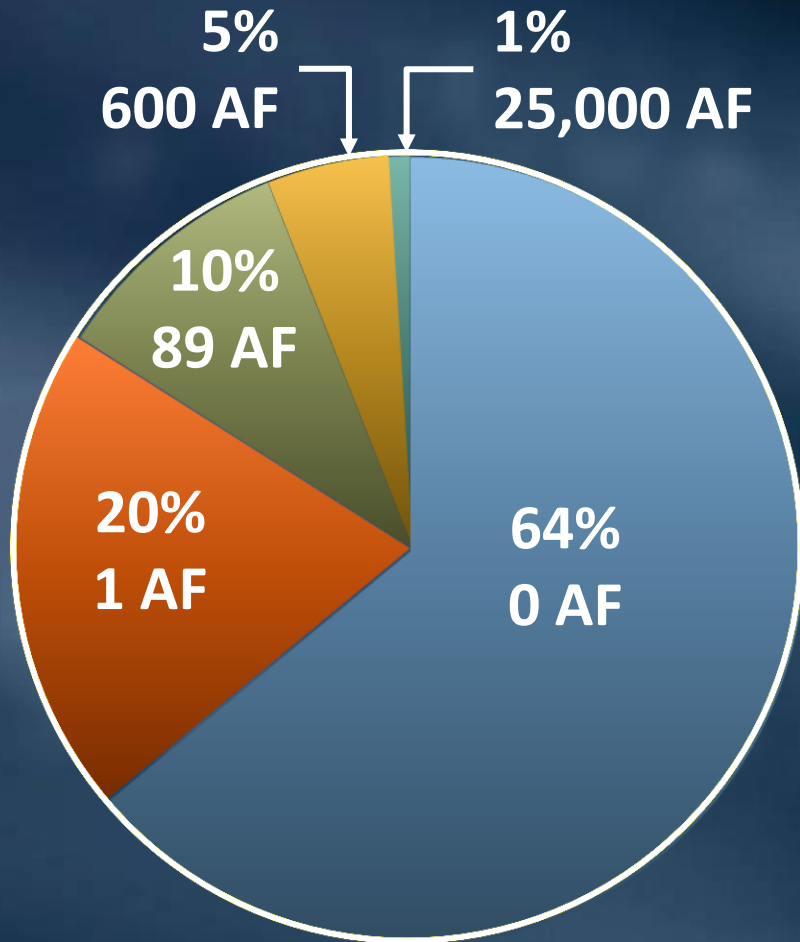
Santa Ana River Watershed

98 percent of water is used/captured

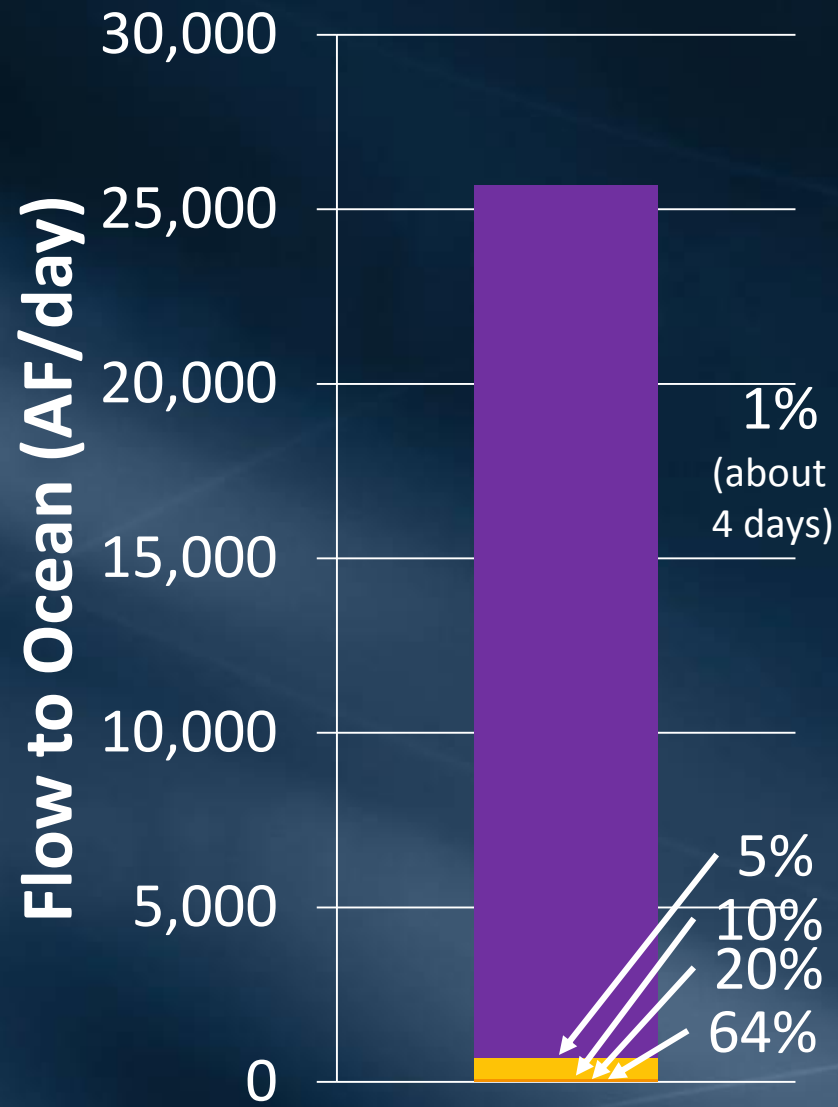


Santa Ana River

No flow 64% of the time



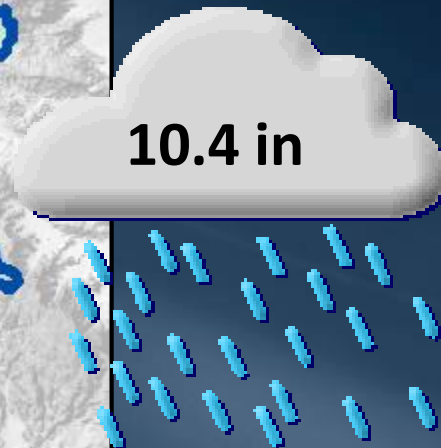
% of the time



San Diego County Watersheds



Active Recharge
8 TAF

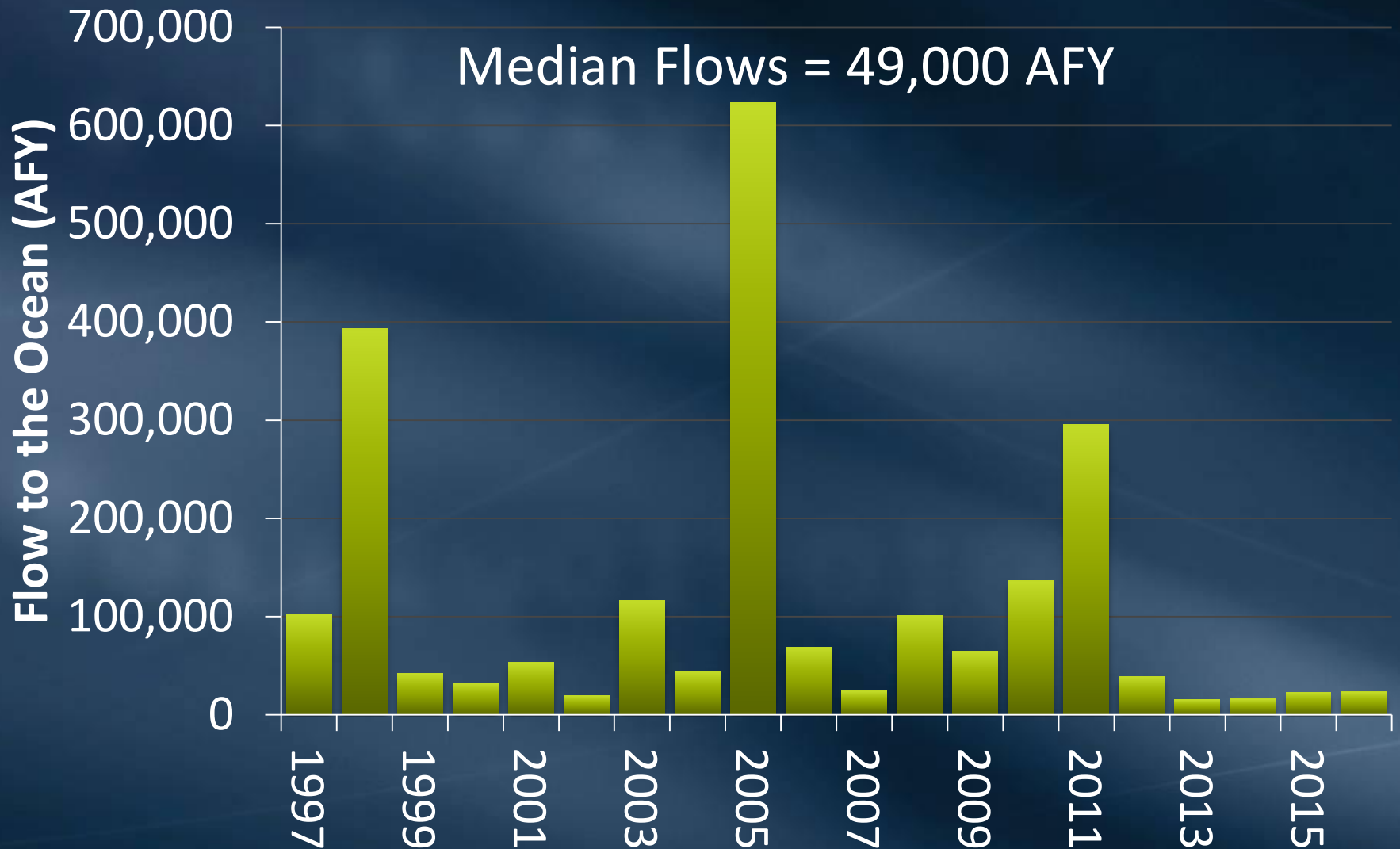


10.4 in

98%
used

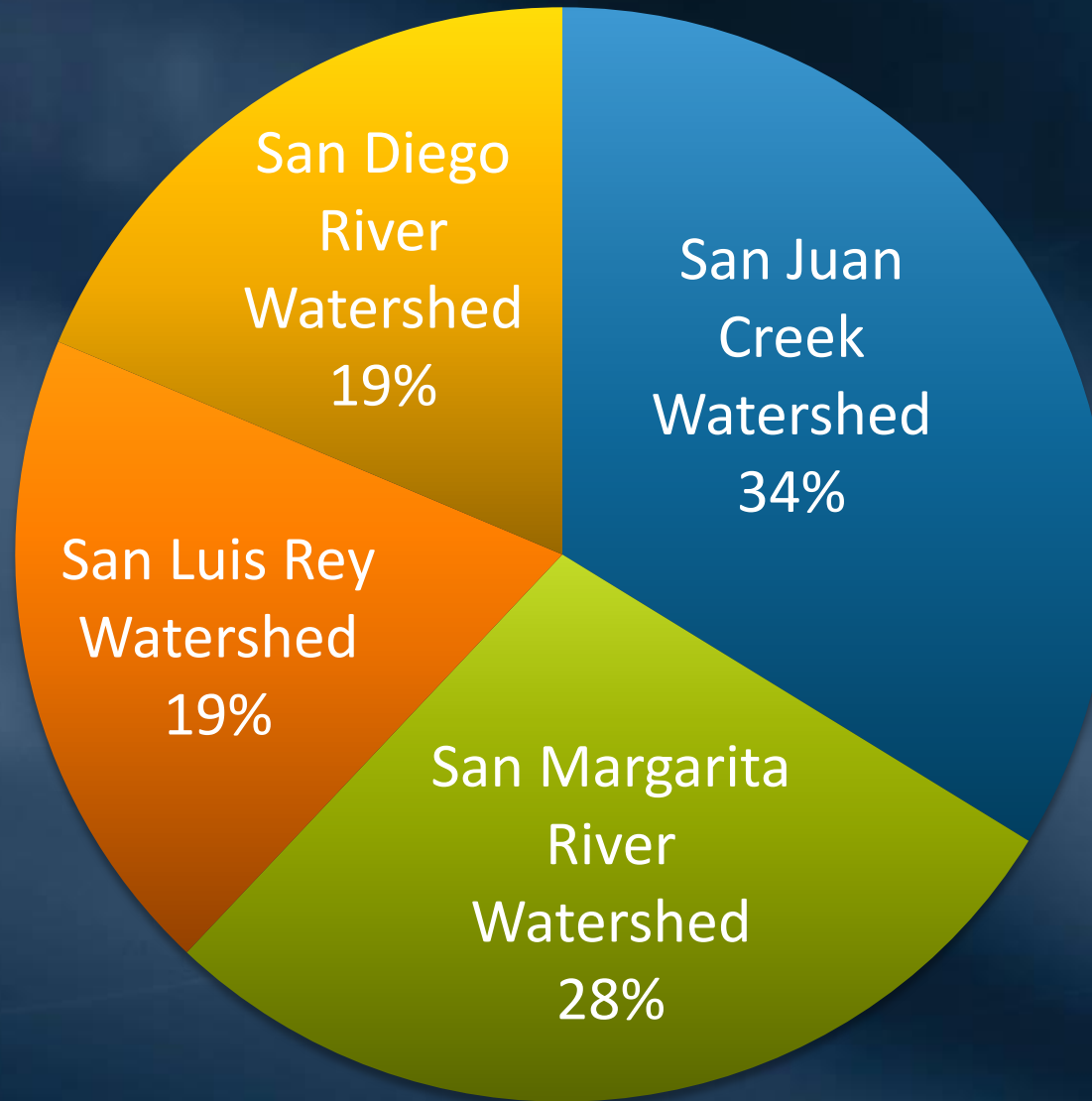
San Diego County Flows to Ocean

98 percent of water is used/captured



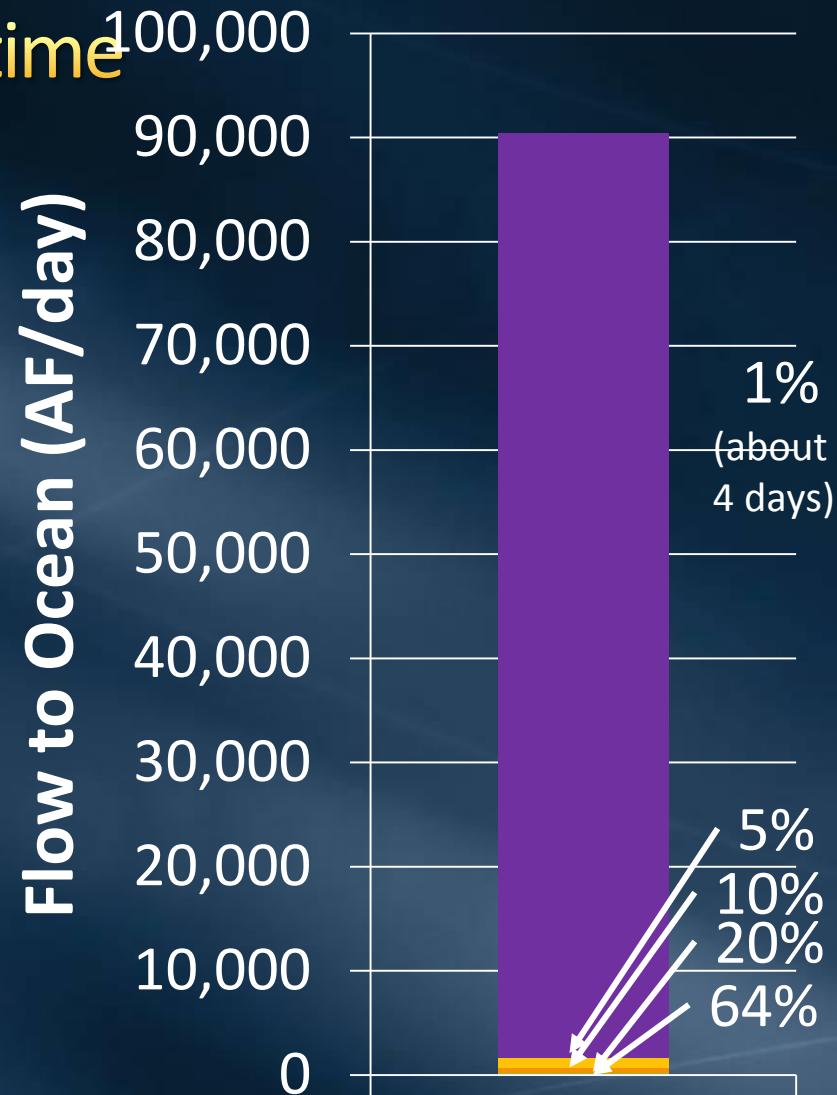
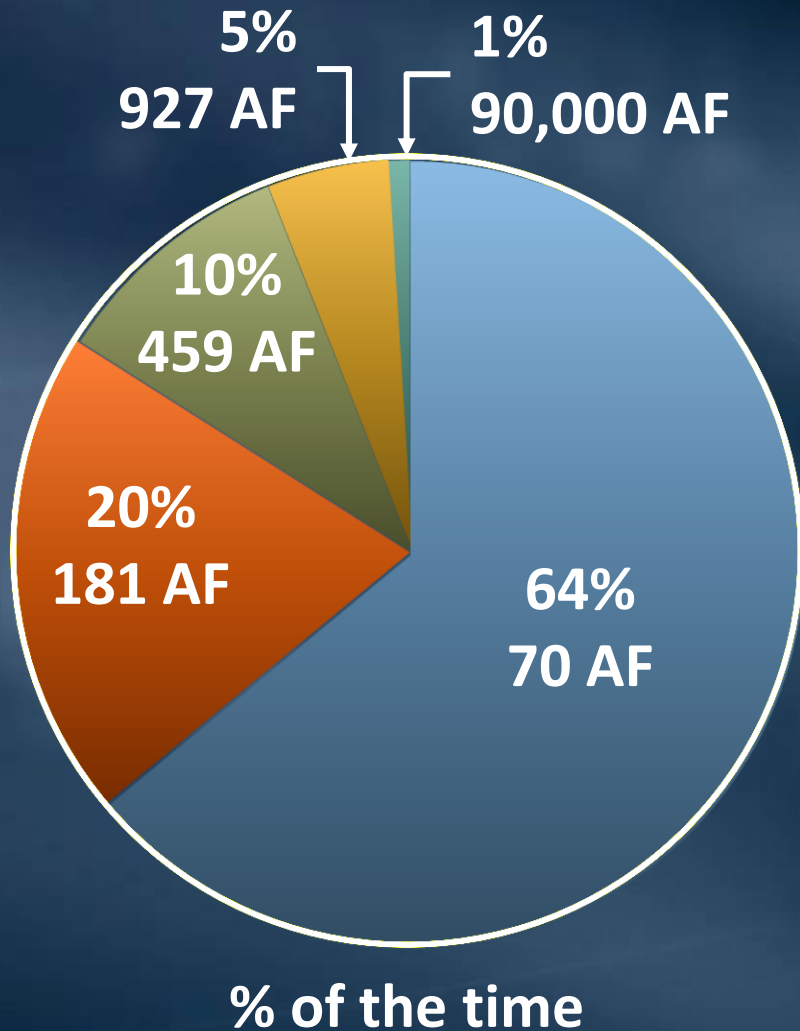
San Diego County Flows to Ocean

Distribution of Flows (WY 1997-2016)



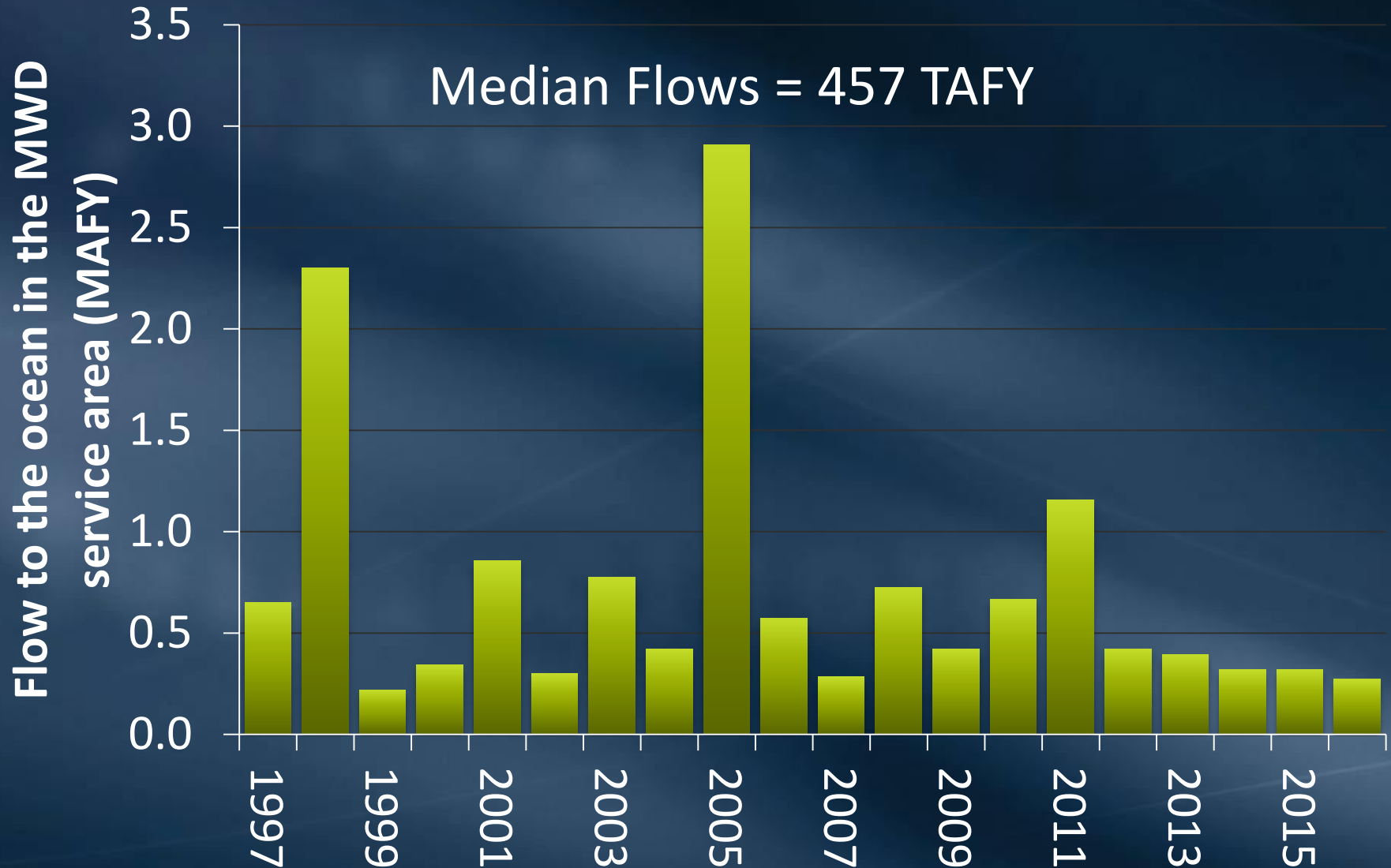
San Diego County

Less than 1,000 AF 95% of the time



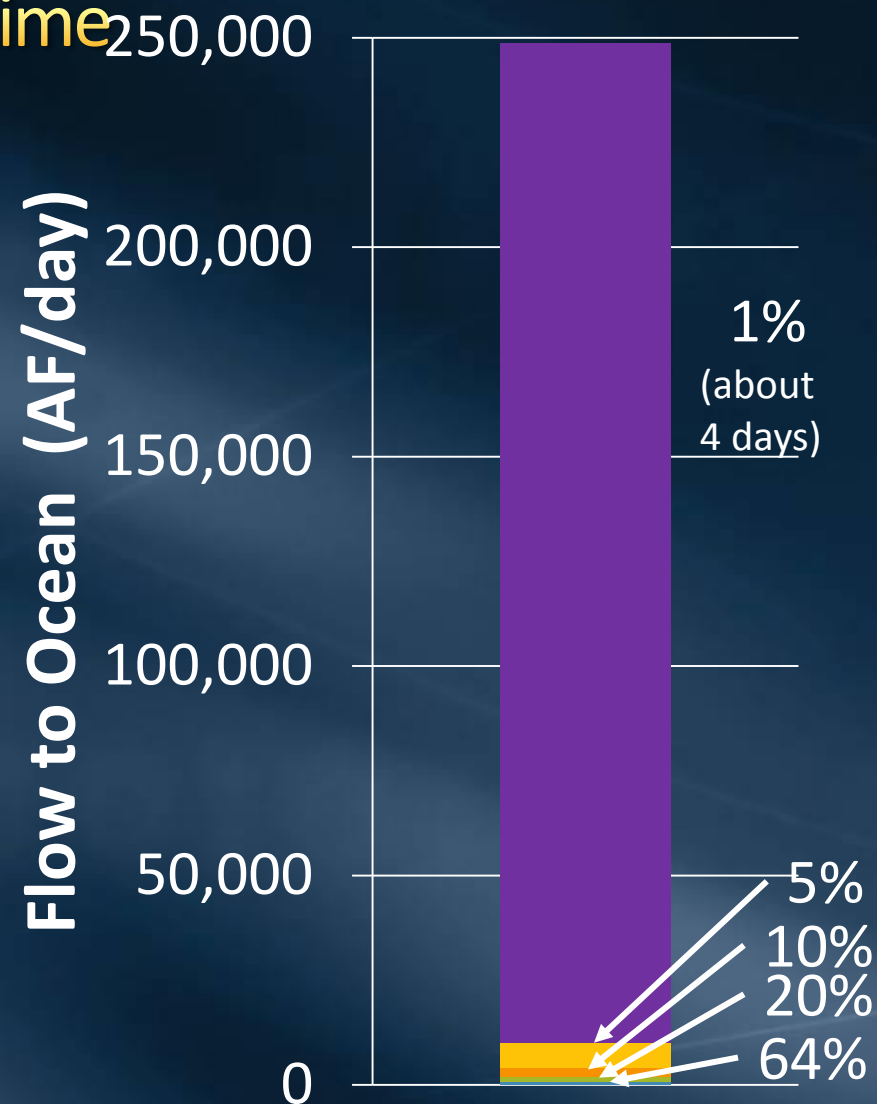
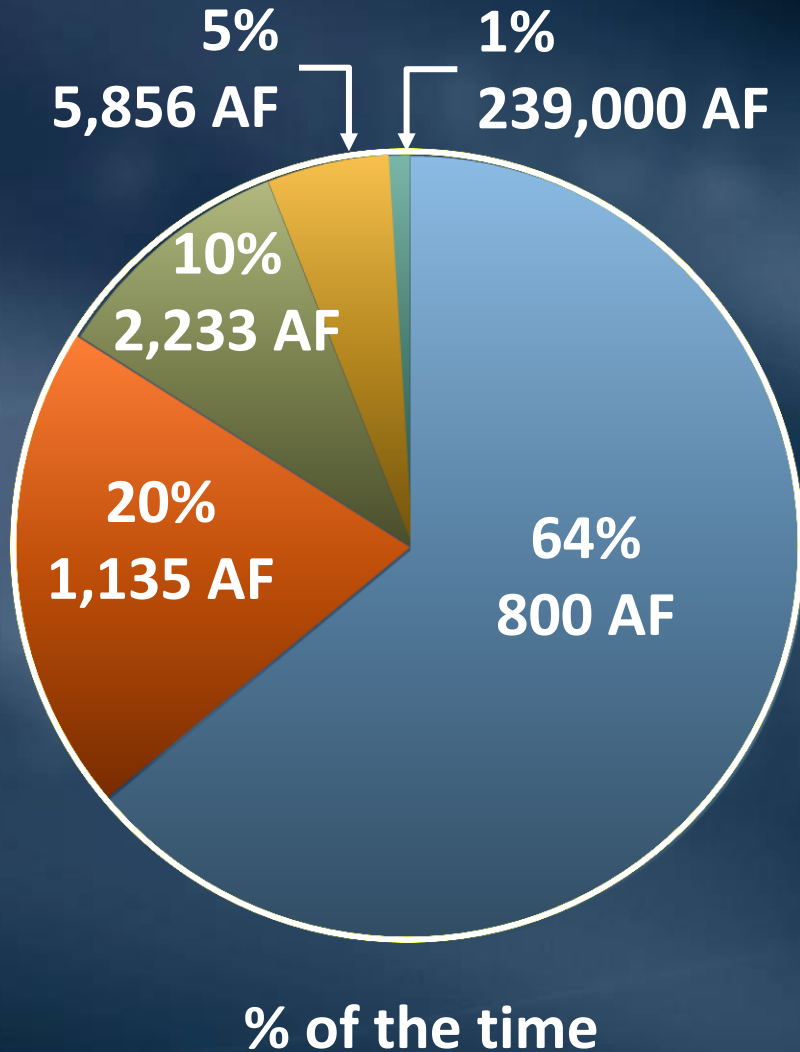
Total Flows to the Ocean

MWD Service Area



MWD Service Area

Less than 1,000 AF 75% of the time



Stormwater in the Metropolitan Service Area



15.2 inches
8.7 MAF



Groundwater
Recharge



Active
325 TAF



Passive
745 TAF

Evapotranspiration



7.2 MAF

Runoff to
Ocean



457 TAF

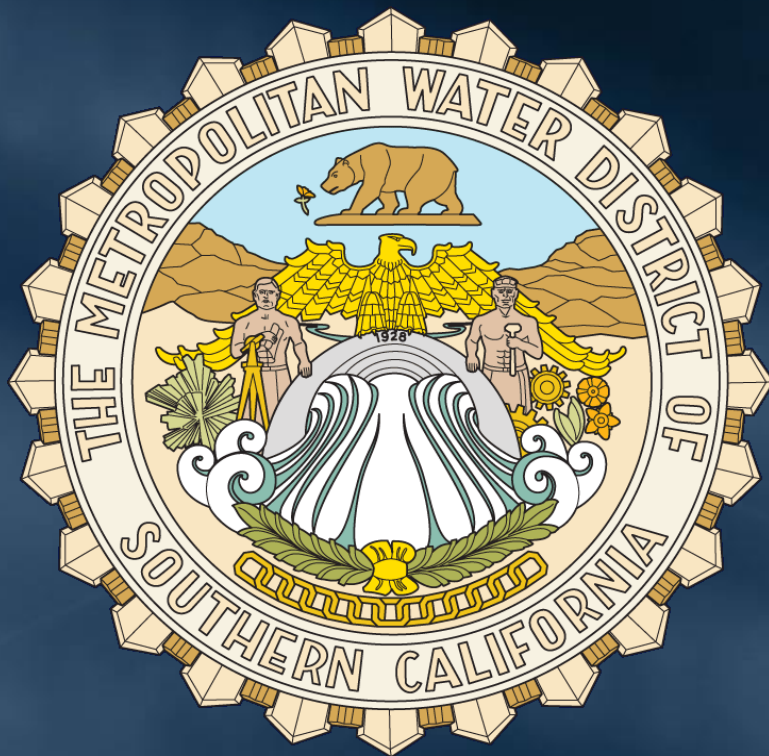
95%
used





Observations and Future Activity

- Highly variable stormwater capture
 - Most of the flow comes in a few days per year
- Costs/Funding of stormwater projects
 - SCWC Stormwater Task Force Report in April
- Basin Management
 - Review basin management practices regarding stormwater
 - Evaluate how stormwater is accounted for in safe yield calculations



Footnotes

- Data period
 - Water year 1997-2016
- Daily streamflow data
 - USGS stream gauge data
 - County of Los Angeles Department of Public Works annual hydrology reports
- Groundwater recharge data
 - Basin manager/watermaster reports
 - County of Los Angeles Department of Public Works annual hydrology report