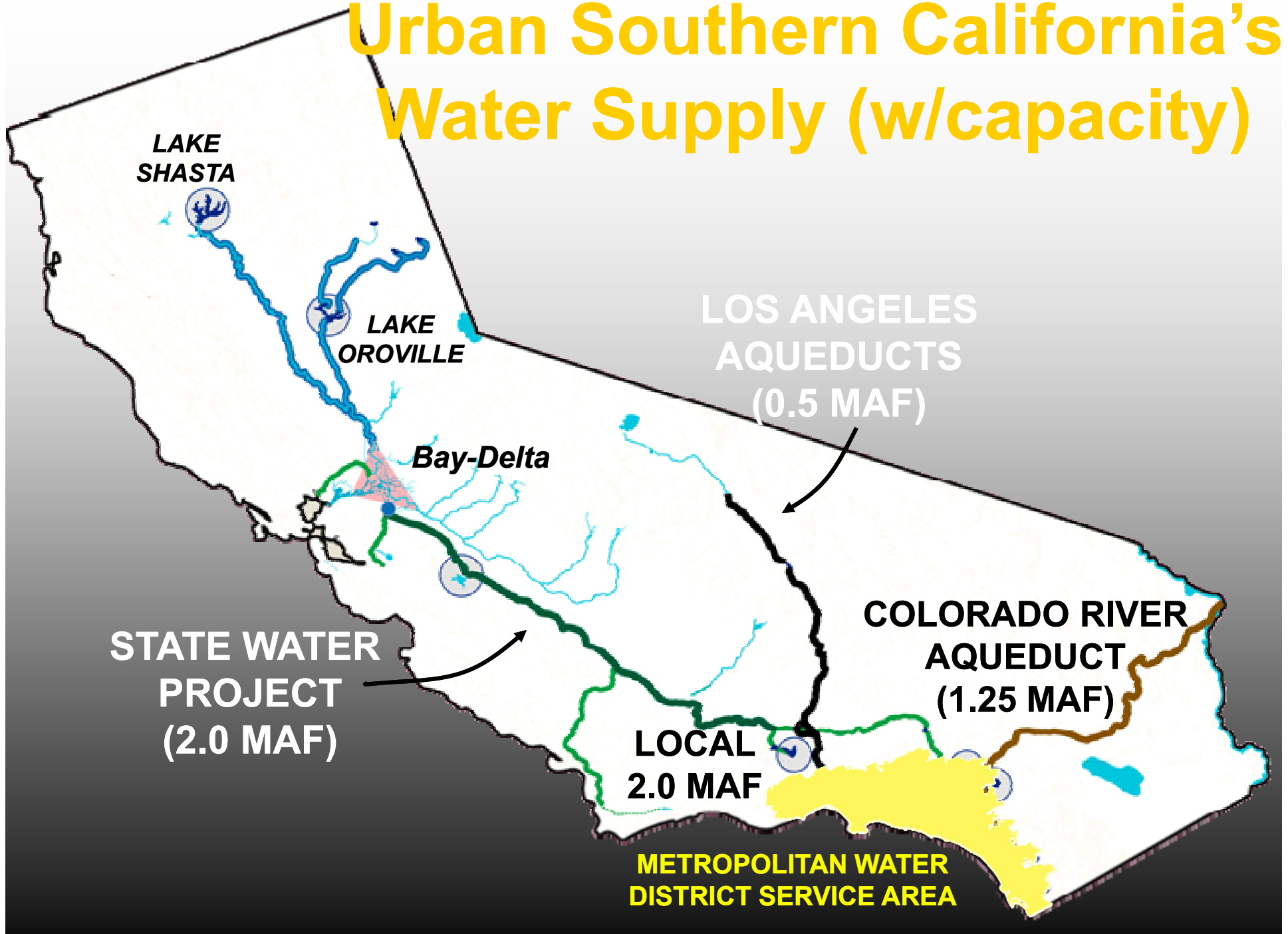


Urban Southern California's Water Supply (w/capacity)



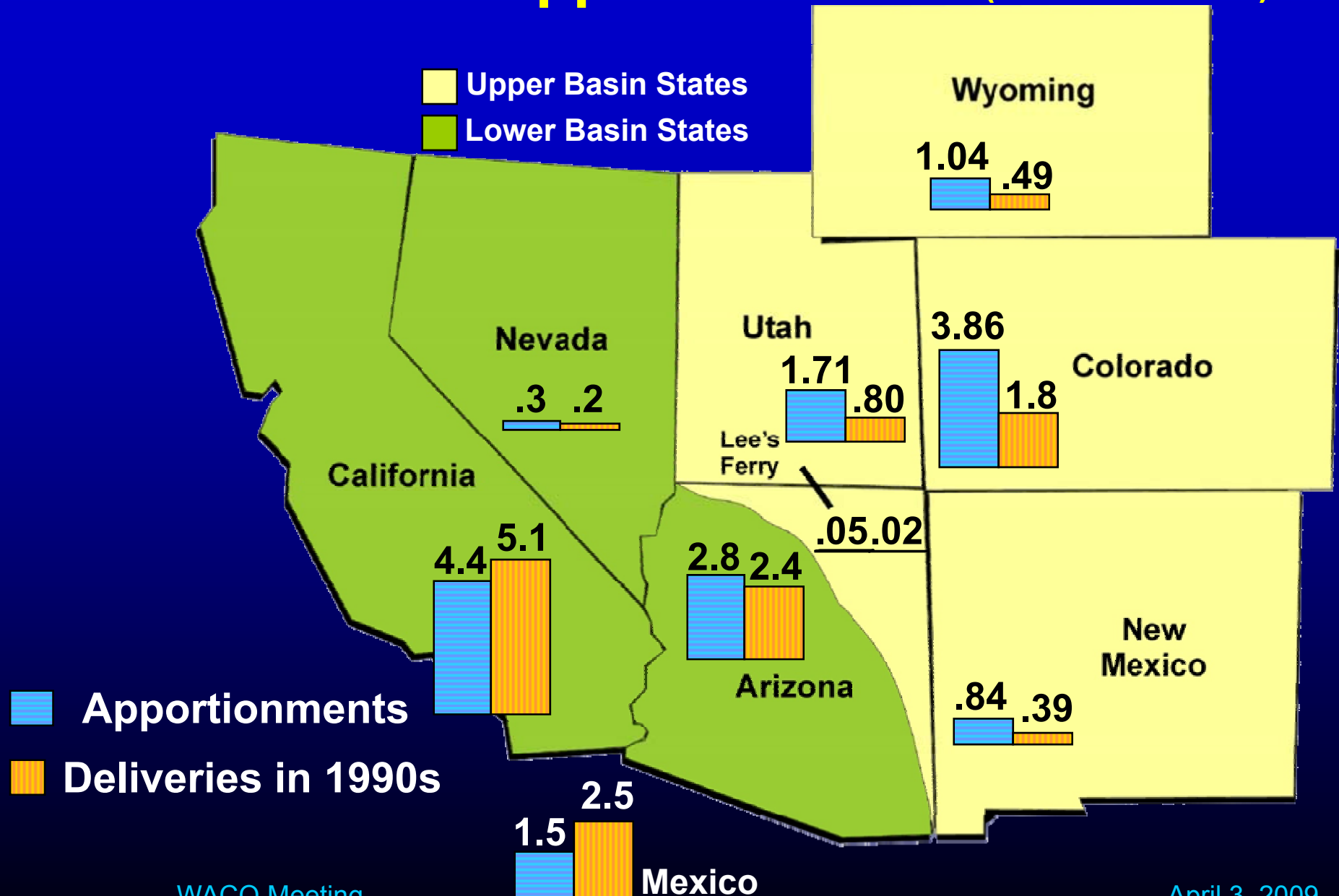
Colorado River



Colorado River Basin



Colorado River Apportionments (Million acre-feet)



California Service Areas



Development of California Plan



California's Colorado River Plan to Reduce Colorado River Use

- Developed in 2000 to gradually reduce use to 4.4 maf by 2016
- Interim Surplus Guidelines “soft landing”
 - Full Supply if Lake Mead > 1145' (62% of capacity)
- Agricultural to urban transfers
 - Water Conservation Programs
 - Land Fallowing Programs
- Included QSA

Quantification Settlement Agreement

Quantified Water Budgets

	<u>maf</u>
PVID	} 0.42 (Average)
Yuma Project	
IID	3.10
CVWD	0.33
<u>MWD*</u>	<u>0.55</u>
Total	4.40

*Amount fluctuates based on PVID/Yuma Project use

Key Transfers in California Plan

Long-term Yield from Water Conservation Transfers/Exchanges:

- IID/MWD Transfer: 85,000 af/yr
- PVID/MWD Program: up to 120,000 af/yr
- All-American/Coachella
Canal Lining: 93,000 af/yr
- IID/SDCWA Transfer: up to 200,000 af/yr

Year 2000: California Plan was to Keep CRA Full Every Year

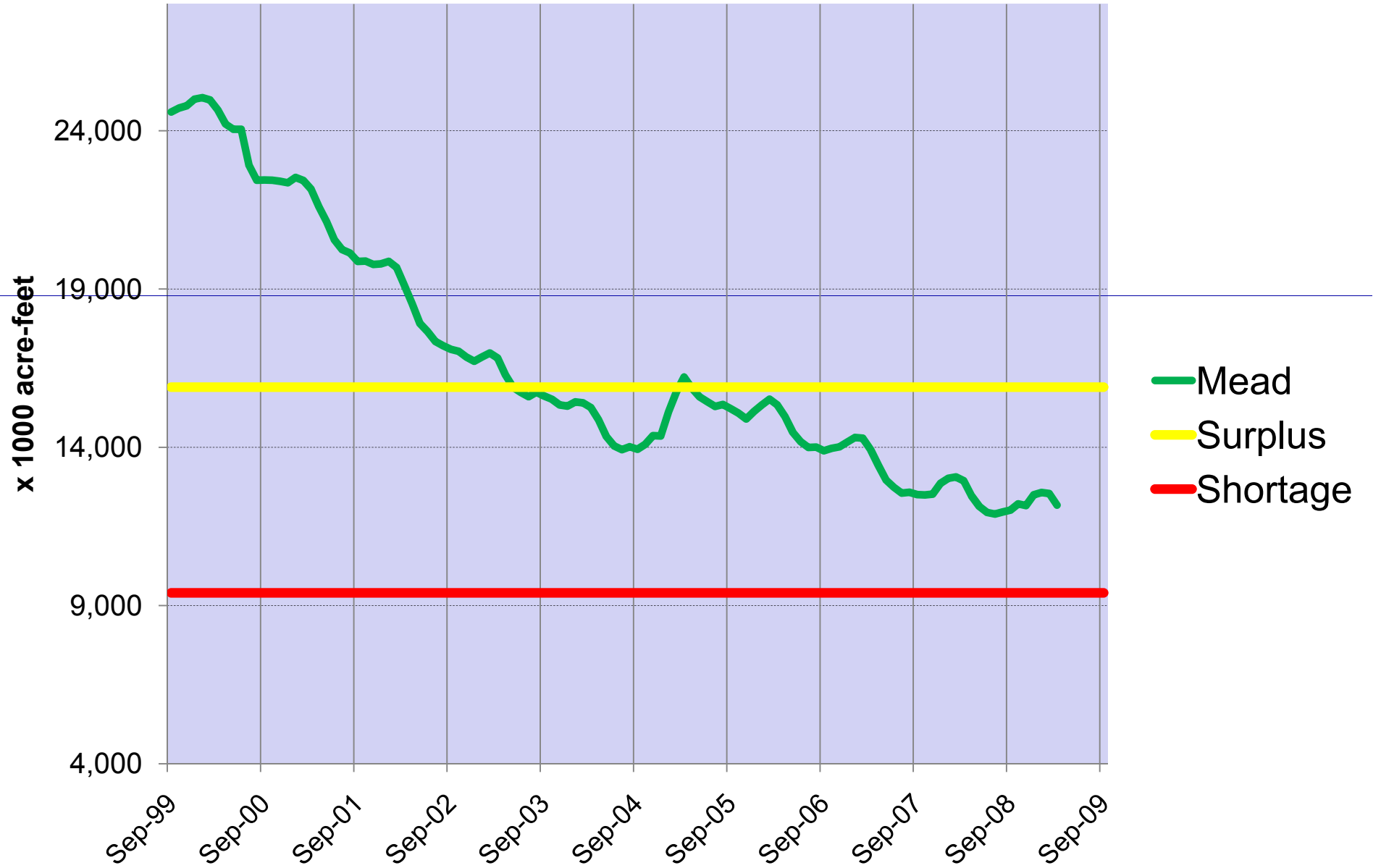
- Ag to Urban Transfers increase through time
- Surplus slowly decreases through time
- CRA stays full via combination of transfers and surplus



Even the Best Plans Can Run Into Trouble...



Lake Mead Storage 2000 – 2009



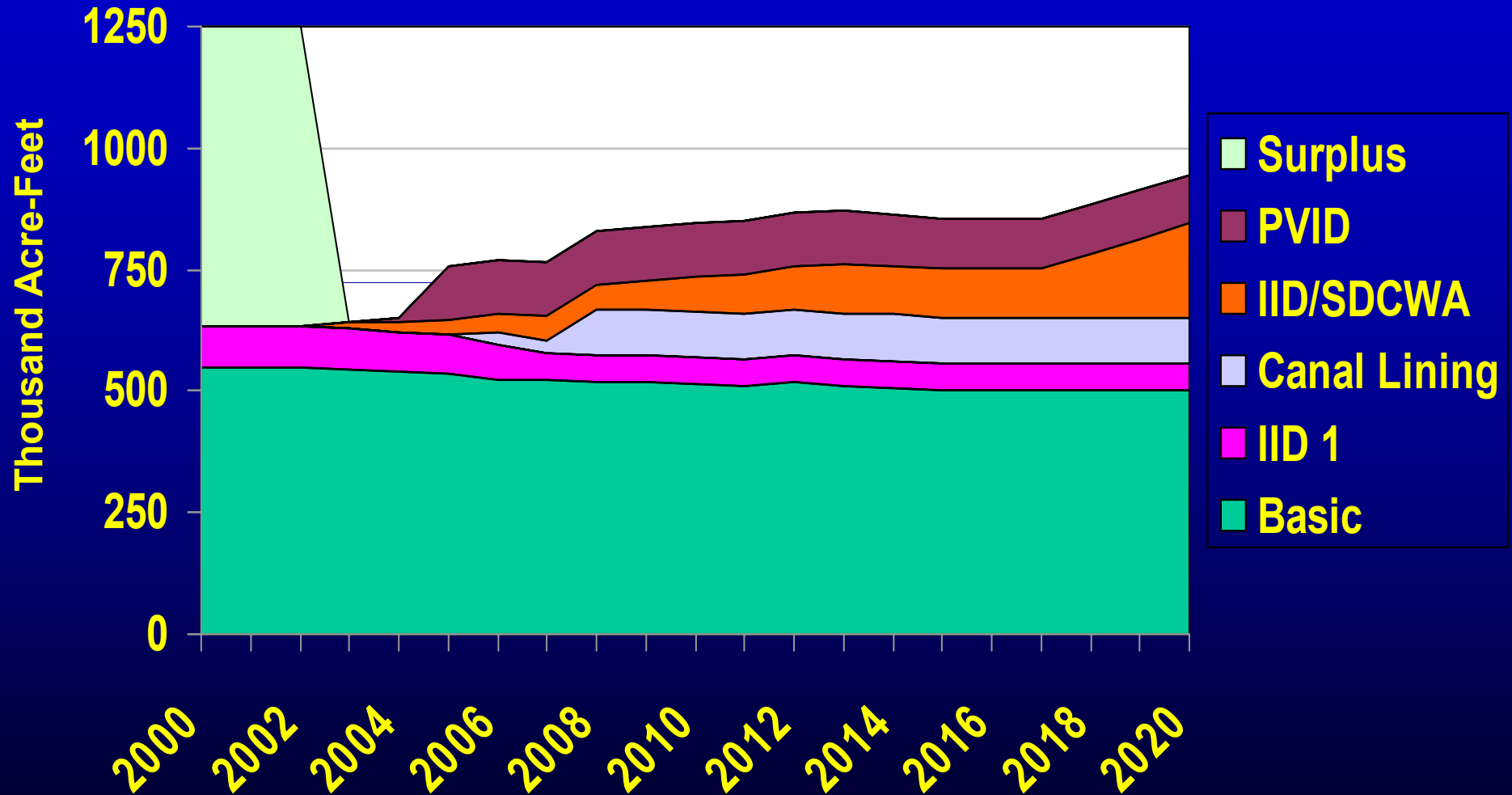
Year 2004: Revised California Plan: No surplus; CRA 1/2 full, slow increases

- **Ag to Urban Transfers move forward; limited by Salton Sea restrictions**
- **No surplus anticipated**
- **MWD endures “hard landing”**



Actual/Projected CRA Supplies

From QSA Programs 2000 - 2020



Diverse Supplies Help MWD Manage CRA Cutback...



CRA

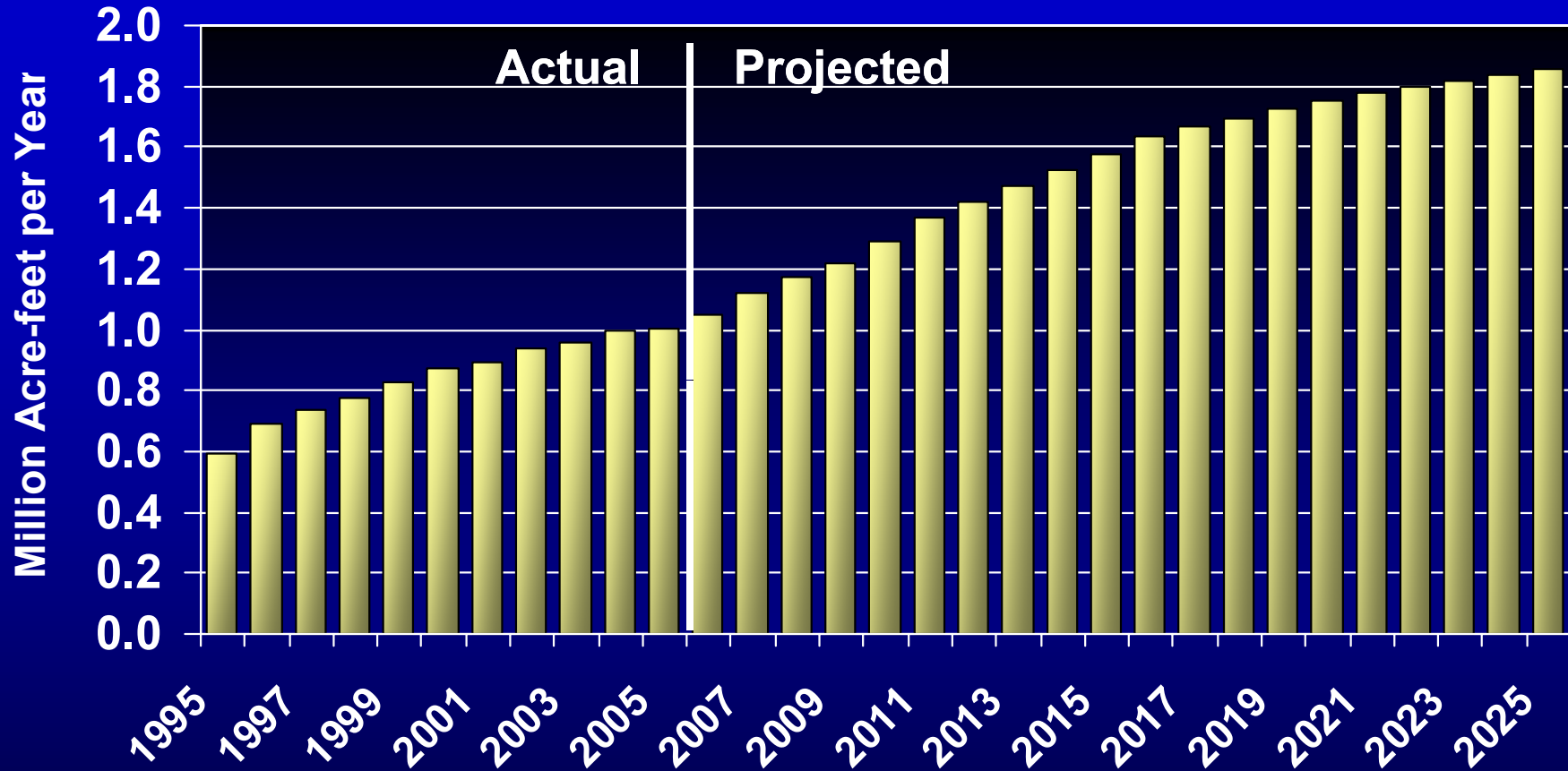


SWP



Storage and Transfers

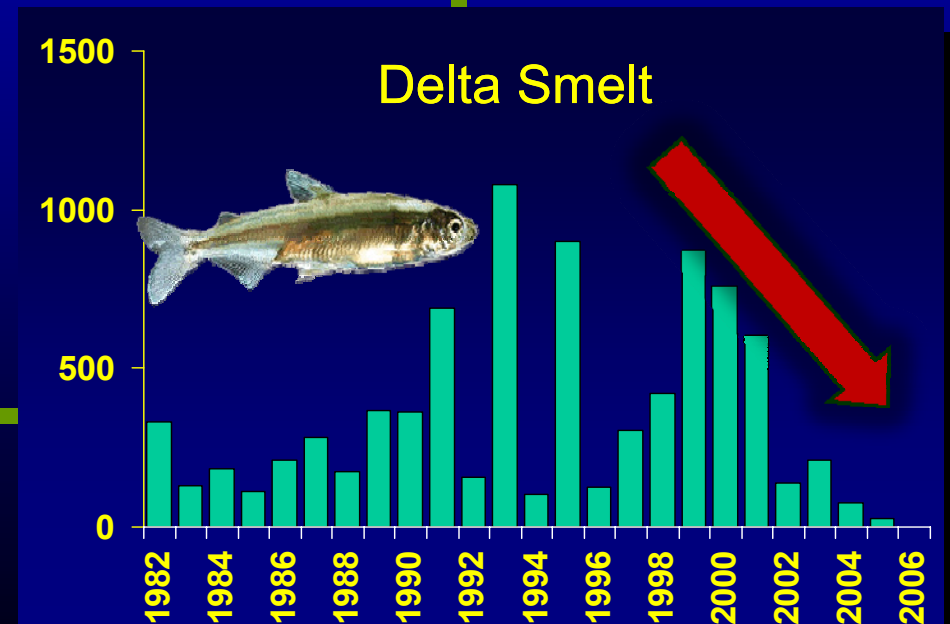
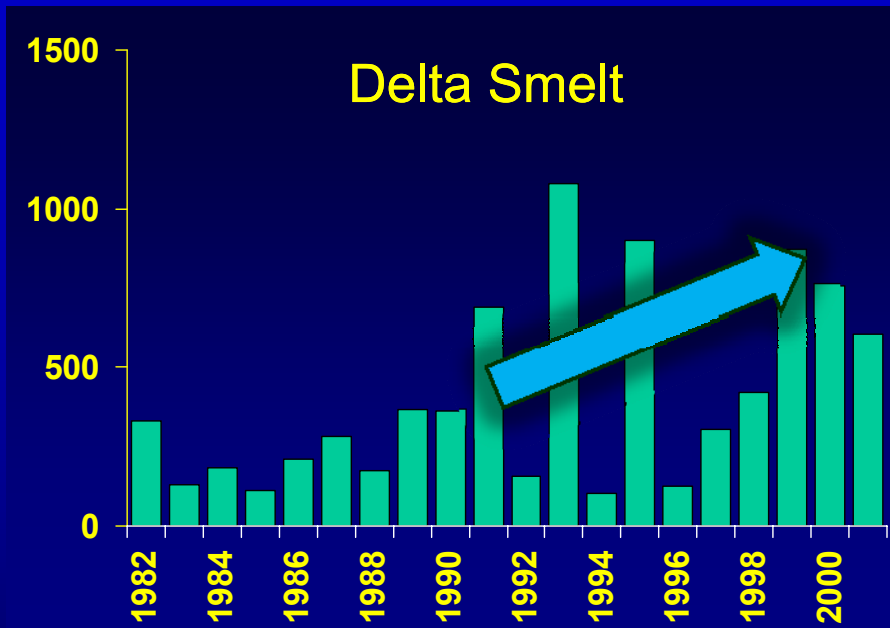
...Along with Conservation in MWD's Service Area



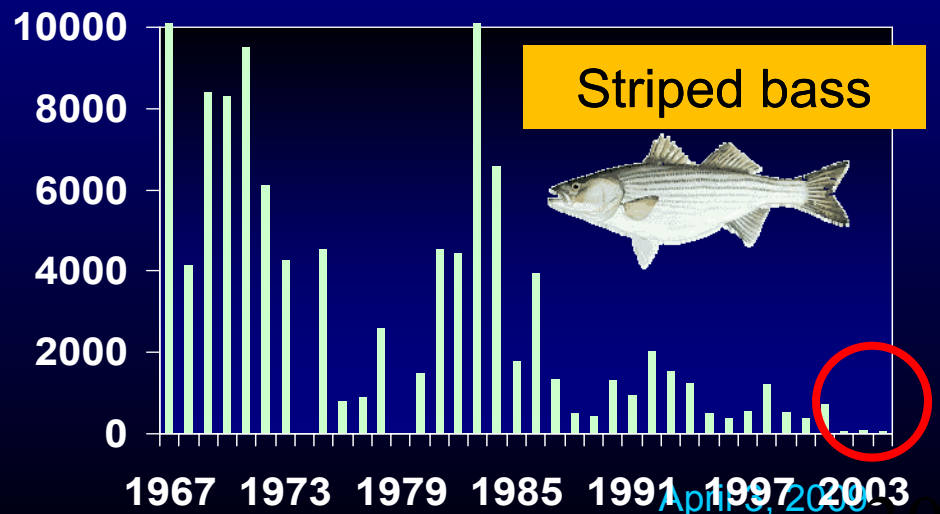
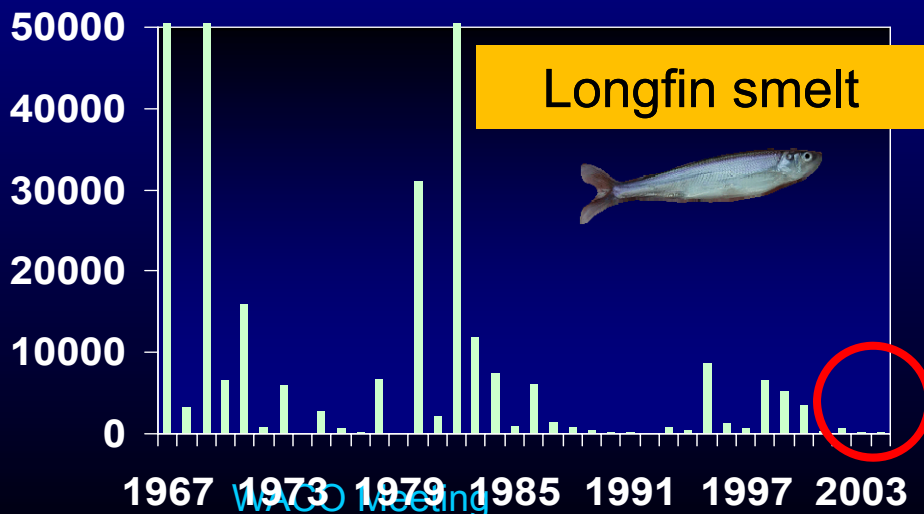
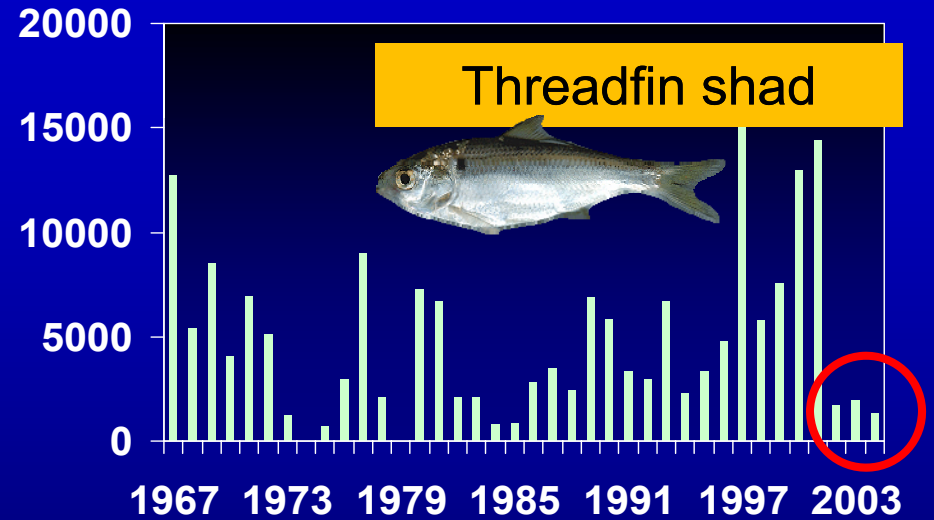
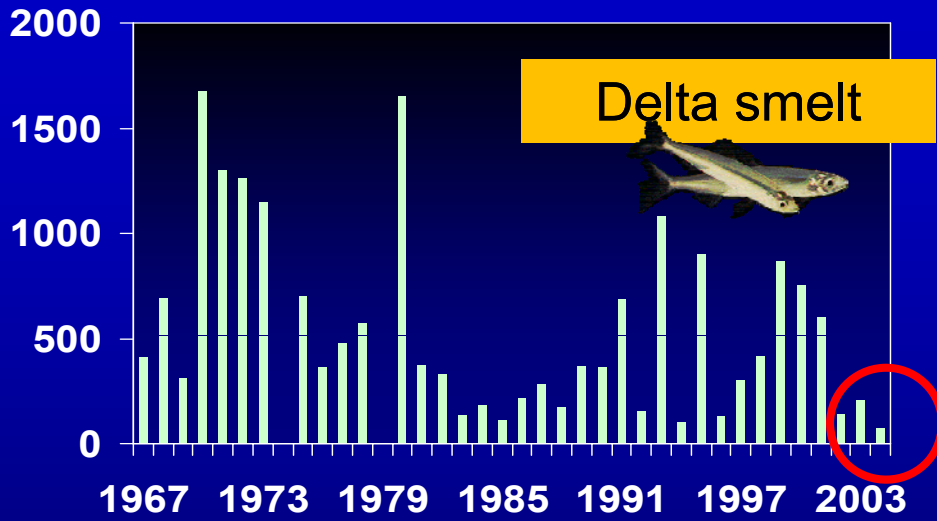
Regional Investments:	Thru 2006	Thru 2025
Urban Conservation	\$ 400 mil	\$1,400 mil
Recycling & Desal	\$1,340 mil	\$6,100 mil
Total	\$1,740 mil	\$7,500 mil

Delta Fisheries – 2001 vs. 2006

A Downturn in Delta Smelt



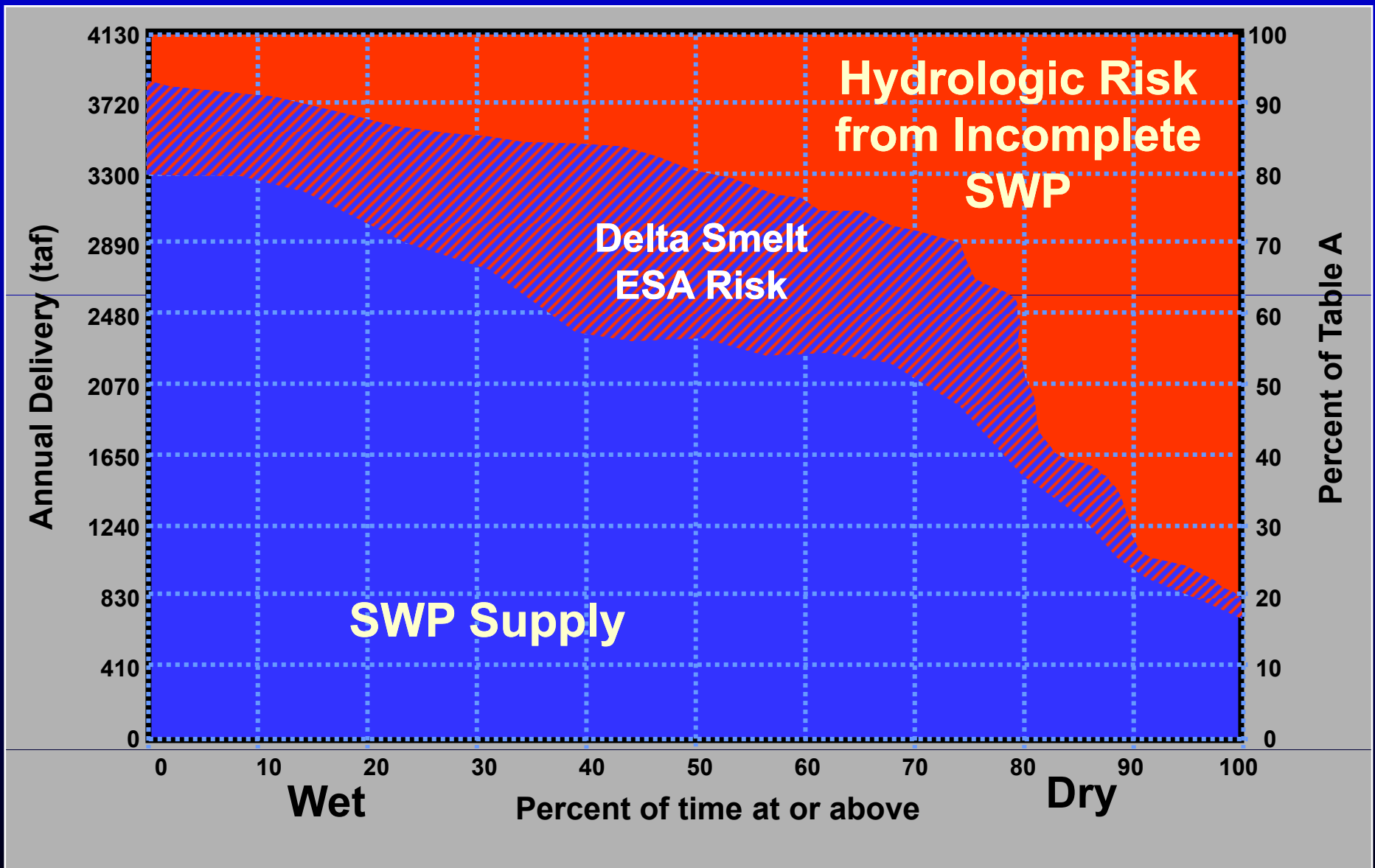
... and Other Pelagic Species are Declining



WCO Meeting

April, 2000

SWP Reliability



Estimated SWP Water Supply Cutbacks due to ESA Restrictions

	Average Year	Dry Year
2007 Court Order (Judge Wanger)	950 taf	470 taf
2008 Delta Smelt BO (USFWS)	900 taf	580 taf
Longfin Smelt BO (CDFG)	50 taf	50 taf
Salmon BO (NMFS)	600 taf	350 taf
Total	2.5 MAF (44% cutback)	1.45 MAF (51% cutback)

Coping with Drought and Restrictions

MWD Plans for Meeting the Region's Needs

- **Long-term Bay-Delta Solution Needed**
 - Likely involve a canal around Delta
 - Timeframe 10 to 15 years
- **Need for “bridge” supplies**
 - Short-term Delta Improvements
 - Increased conservation, recycling, desalination
 - Obtain additional supplies on CRA, SWP

Development of Colorado River Basin States Agreement *Going Beyond 4.4 MAF...*



Basin States Agreement Elements of Particular Importance to CA

- **Up to 1.5 MAF of New Storage at No Cost**
 - Intentionally Created Surplus
- **Extension of Interim Surplus Guidelines**
 - Surplus when Lake Mead > 62% full
- **Ability to Partner with Other Agencies to Fund System Improvement Projects**
 - Drop 2, other projects

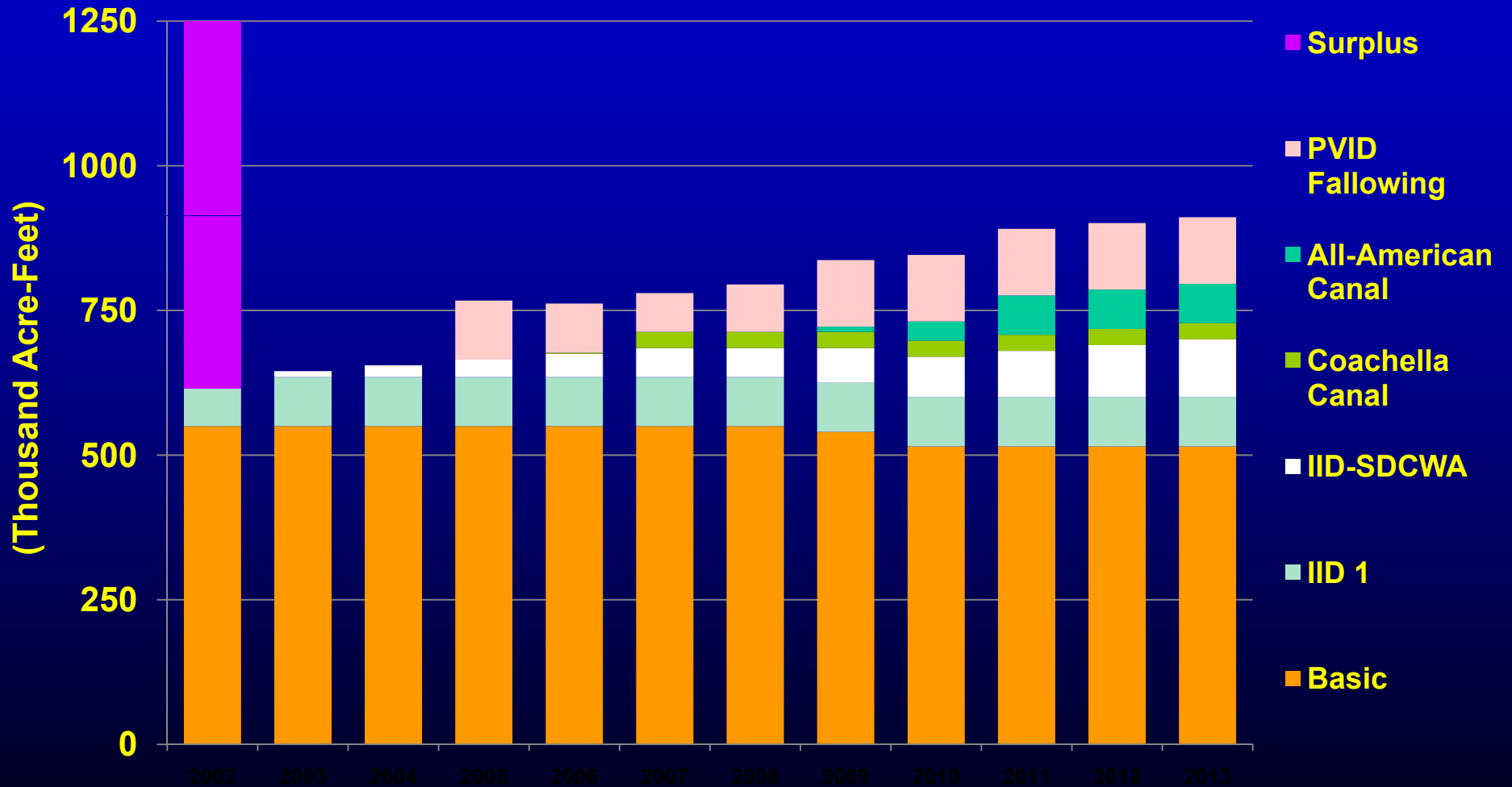
Going Beyond 4.4: Yield from MWD's Interstate Programs 2008

Recovery of Water Stored in AZ:	28 taf
Lake Mead ICS Water:	43 taf
Drop 2 ICS Water:	34 taf
<u>SNWA Exchange Water:</u>	<u>45 taf</u>
Total	125,000 af

Actual/Projected CRA Supplies

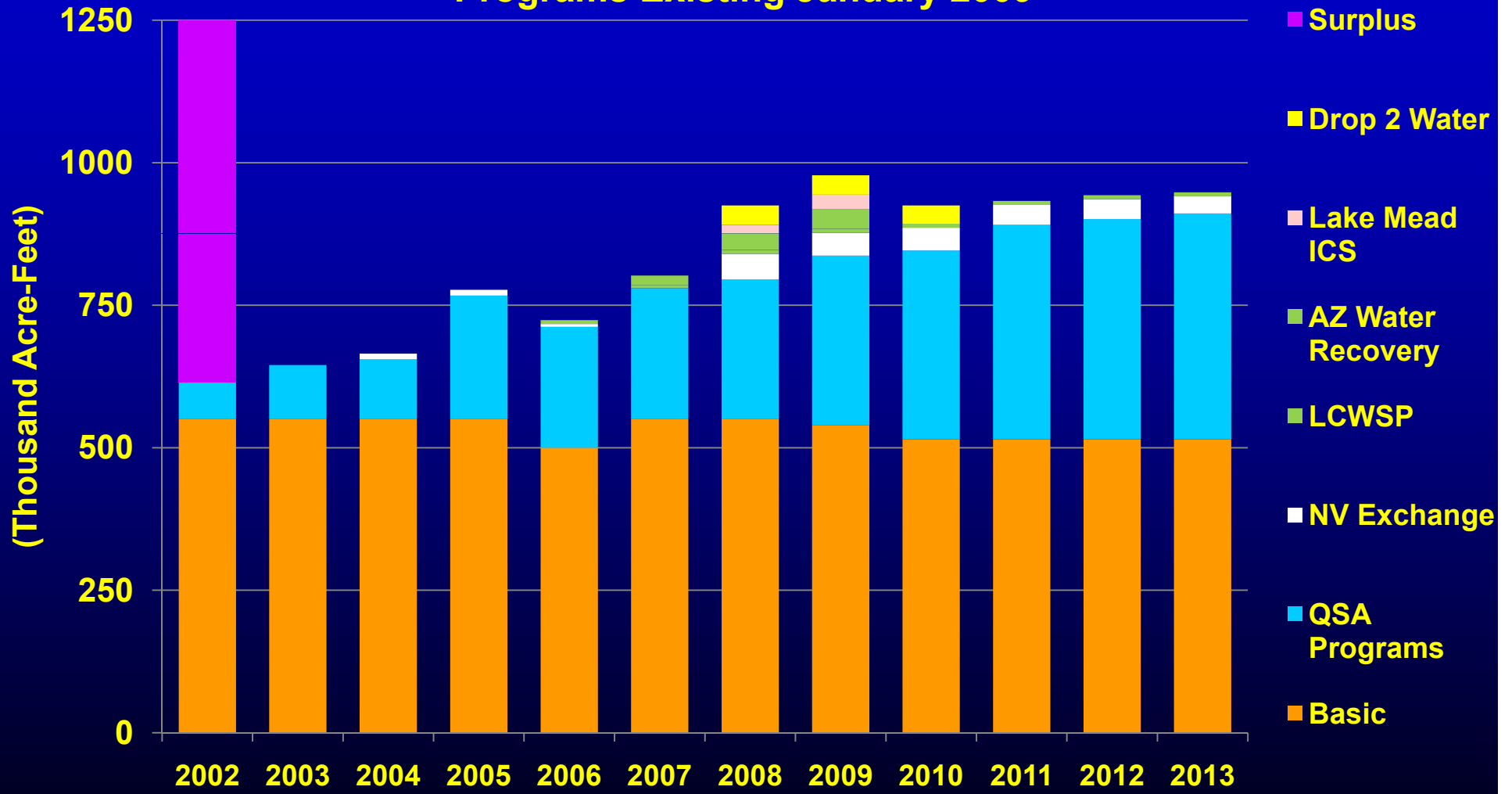
2002-2013

QSA Programs



Actual/Projected CRA Supplies 2002-2013

Programs Existing January 2009



PVID Emergency Fallowing Program



- One-year agreement, starting summer '09
- 15% fallowing increase valley wide (44% total)
- MWD pays \$1700 for each fallowed acre
 - ~\$340/AF
- Provides ~66,000 AF

Potential Additional Following Programs with Other California Agencies

- MWD in discussions with Bard/CR Indians for short-term program
 - Up to 10,000 AF
- PVID program may be extended, but 3rd party impacts could be issue
- IID Transfer Limitations
 - Impacts to Salton Sea
 - SDCWA's right of first refusal on IID transfers



Discussions with Coachella Valley Water District

- CVWD may call up to 55 taf of MWD water any year
- Agreement reached for 2009; discussions continue for 2010
- Proposal to move water to MWD for later return (money or water)



Proposal for Funding Yuma Desalting Plant

- YDP would conserve 30 taf during 2009-10
- MWD, SNWA, and CAP would augment USBR funding
 - MWD 60%
 - SNWA 30%
 - CAP 10%
- Agencies would receive proportional ICS Storage credits



Proposal for Funding Agreement (cont.)

- Agencies would fund costs as they occur
 - Energy, Chemicals, Contract Labor
- Estimated non-federal costs: \$9 to \$14 million (\$300-\$450/AF)
 - Depends on federal funding level, actual O&M costs



Issues with Operating Yuma Desalter

- **Environmental Groups Concerned over Impact to Santa Clara Wetlands**
 - **Threatened lawsuit**
- **Mexico Expressed Concerns**
 - **Want project as part of overall bi-national effort**
- **Uncertainly of view of new administration**



Discussions with Southern Nevada Water Authority

- MWD/SNWA amending exchange agreement
 - MWD stores water for SNWA at no cost
 - SNWA cannot recover water until 2020
 - Max recovery 30,000 AF/yr
- To date, MWD has stored 70,000 AF for SNWA



Discussions with Southern Nevada Water Authority

- MWD/SNWA exploring expanding exchange to include 2 components
 - SNWA's water stored in AZ
 - SNWA's Drop 2 water
- Exploring opportunities to purchase some of the exchange water from SNWA



Discussions with Central Arizona Project for Potential Water Exchange Program

- CAP stores over 250,000 AF annually
- Proposal being discussed:
 - CAP would bank water with MWD
 - MWD would return water during AZ M&I shortage
 - Discussing annual return limit and cost provisions



Issues with CAP Exchange

- **Ensuring no impact to CAP operations**
 - CAP customers come before MWD
 - In 2009, initial AZ orders exceed supply, limiting exchange opportunities
 - Cash flow needs for CAP needs be addressed
- **Arizona needs assurance it can recover water**
 - AZ needs ironclad guarantee that MWD would return water

Hayfield Water Recovery

- **Recovery of Water from Hayfield**
 - **MWD has stored about 100,000 acre-feet in Hayfield groundwater basin**
 - **Developing proposal to pump water into CRA as early as 2011**



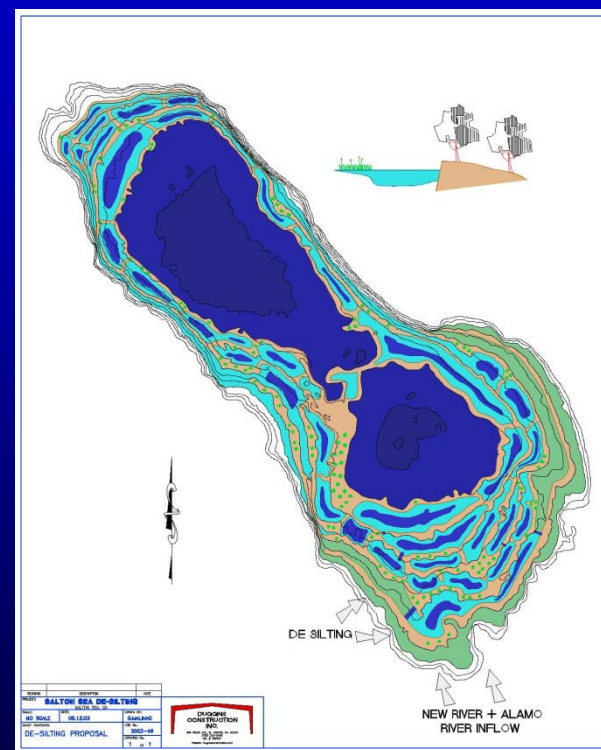
Salton Sea Restoration Transfer from IID “c(2) Transfer”

- QSA included IID transfer tied to Salton Sea Restoration
 - Up to 1.6 maf potentially available over 15 years
 - Requires state legislature approval and CEQA analysis
 - DWR initially opposed transfer
 - State responsible for mitigation, including air quality impacts



Salton Sea Restoration Transfer from IID “c(2) Transfer”

- DWR’s preferred alternative cost \$9 billion, plus \$100 mil. annual O&M costs
- Stakeholder group developed alternative, which includes up to 700 taf transfer to MWD
 - IID, MWD, SDCWA, Pacific Inst.
 - Habitat and air quality mitigation
- DWR management open to proposal, needs CEQA and state legislative approval



Bi-national Water Management Discussions

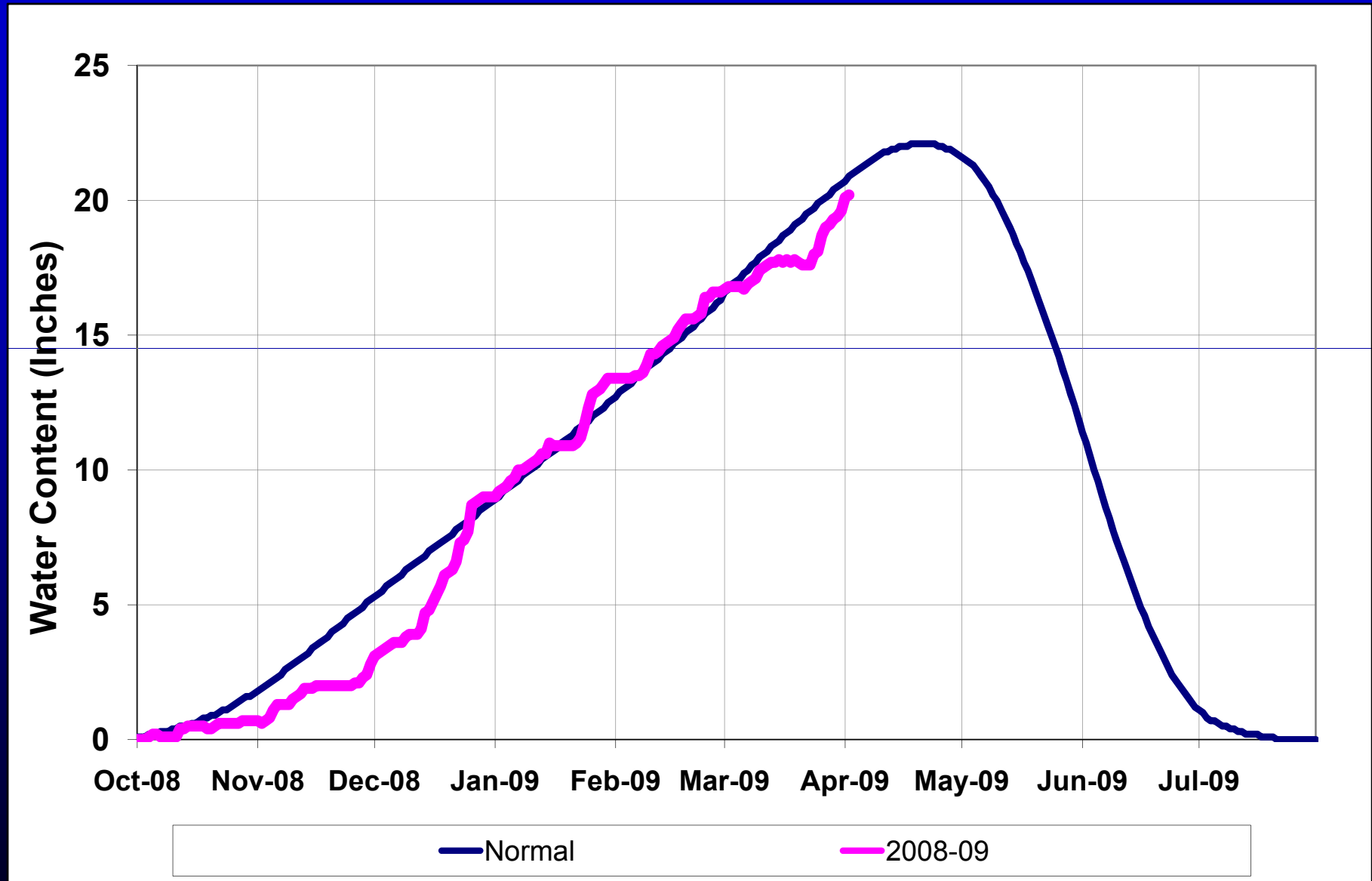
- IBWC established Mexico/U.S. group to address water issues
- Basin States develop proposal and will share with Mexico in May or June
- Current focus is agricultural efficiency and a desalination plant in Baja California



Potential Water Supply from New Colorado River Programs, 2009-2013

	2009	2010	2011	2012	2013
Following	35	75	75	75	75
YDP		30		30	30
NV/AZ Exc.	30	80	140	140	140
CVWD	25	35	35	35	35
Hayfield			20	20	20
Salt.Sea c2		35	40	45	70
Mexico			25	25	25
Total	100	250	335	365	390

Upper Colorado Basin Snowpack



Summary: MWD's Approach to Managing its Colorado River Supplies

- CA's Delta problems may last many years; need to develop additional Col. Riv. supplies
- New agreements allow CA to use more than 4.4 maf in a way that benefits all states
- CA developing new partnerships with agricultural agencies
- Perhaps Colorado Successes can provide example for Bay-Delta?
 - Cooperation more effective than legal battles?



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