

Adapting to a Changing World: Past EWA actions 2001-2006

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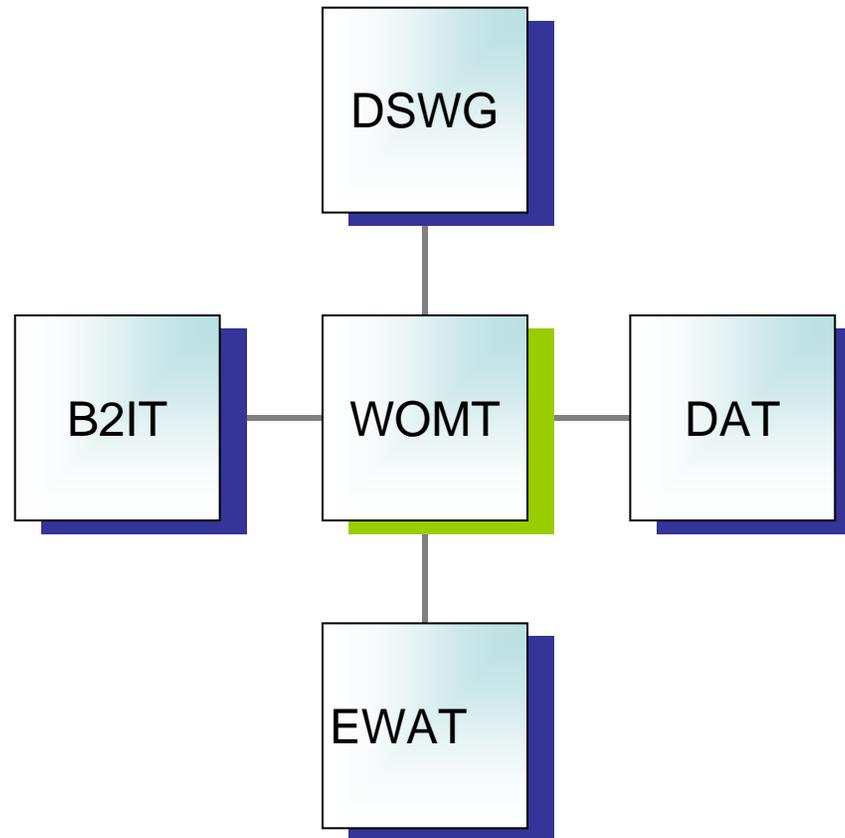


Adapting to Change

- Process started in 1995 Bay-Delta Accord
- D-1641 formalized groups like WOMT & CALFED-OPS to exchange information
- 2000 CALFED ROD set EWA framework
- 2004 CVP/SWP included a network of teams to coordinate operations
- Annual EWA reviews inject new info.



The Process



EWA Implementation

- Fixed budget
- Unknown hydrology & fish actions
- Balance multiple fish concerns over a long season
- Upstream actions compete with Delta
- Typically reactive, instead of proactive
- Process relies equally on judgment and science



Decision Tools

- Salmon Decision Tree
- Delta Smelt Risk Assessment Matrix
- Particle Tracking Model
- Operations Forecasts
- Variable Assets

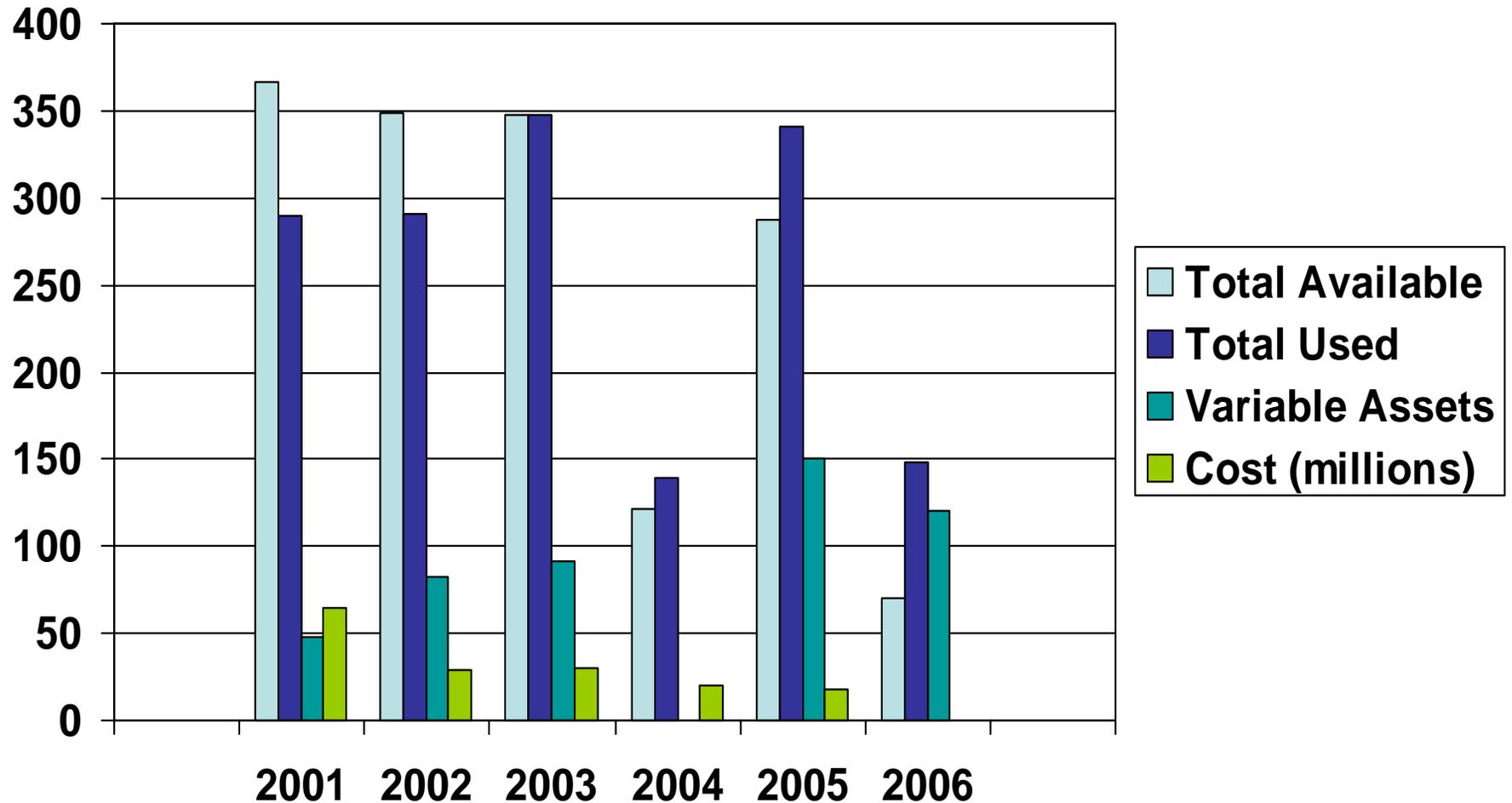


Variable Assets (non-purchased)

- Half of (b)(2) releases pumped at SWP
- Relax E/I ratio
- 500 cfs extra pumping at SWP (Jul - Sept) for transfers or excess water
- Joint Point of Diversion (sharing capacity when it exists at either facility)
- Impacts to fish in of themselves



EWA Water Use by Year (TAF)



Source: www.science.calwater.ca.gov/workshop/ewa

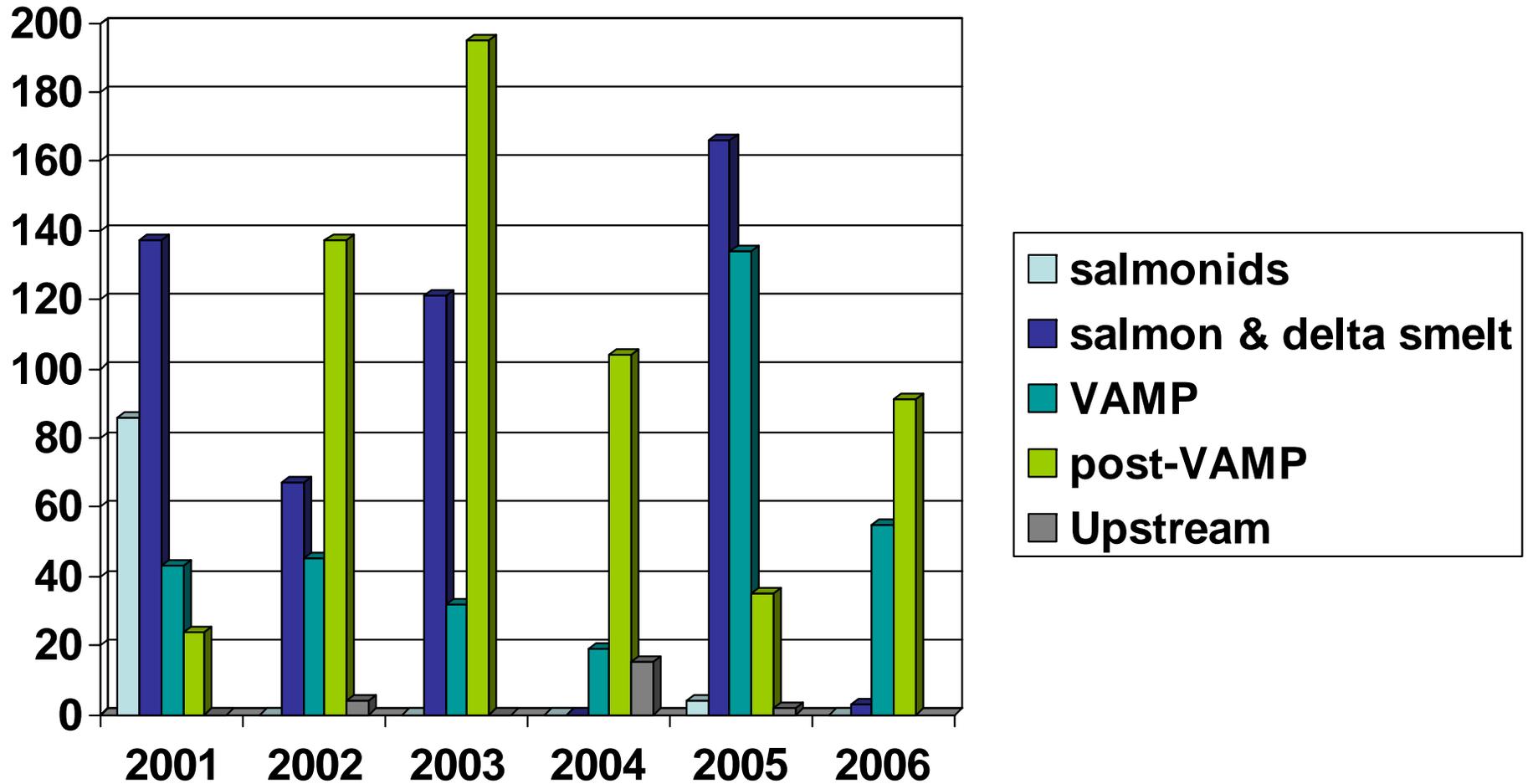


Trends

- EWA use declining
- Less water purchased (less \$ available)
- Variable assets increasing – due to borrowing in '05 & '06



EWA Use by Fish Actions (TAF)



Source: www.science.calwater.ca.gov/workshop/ewa

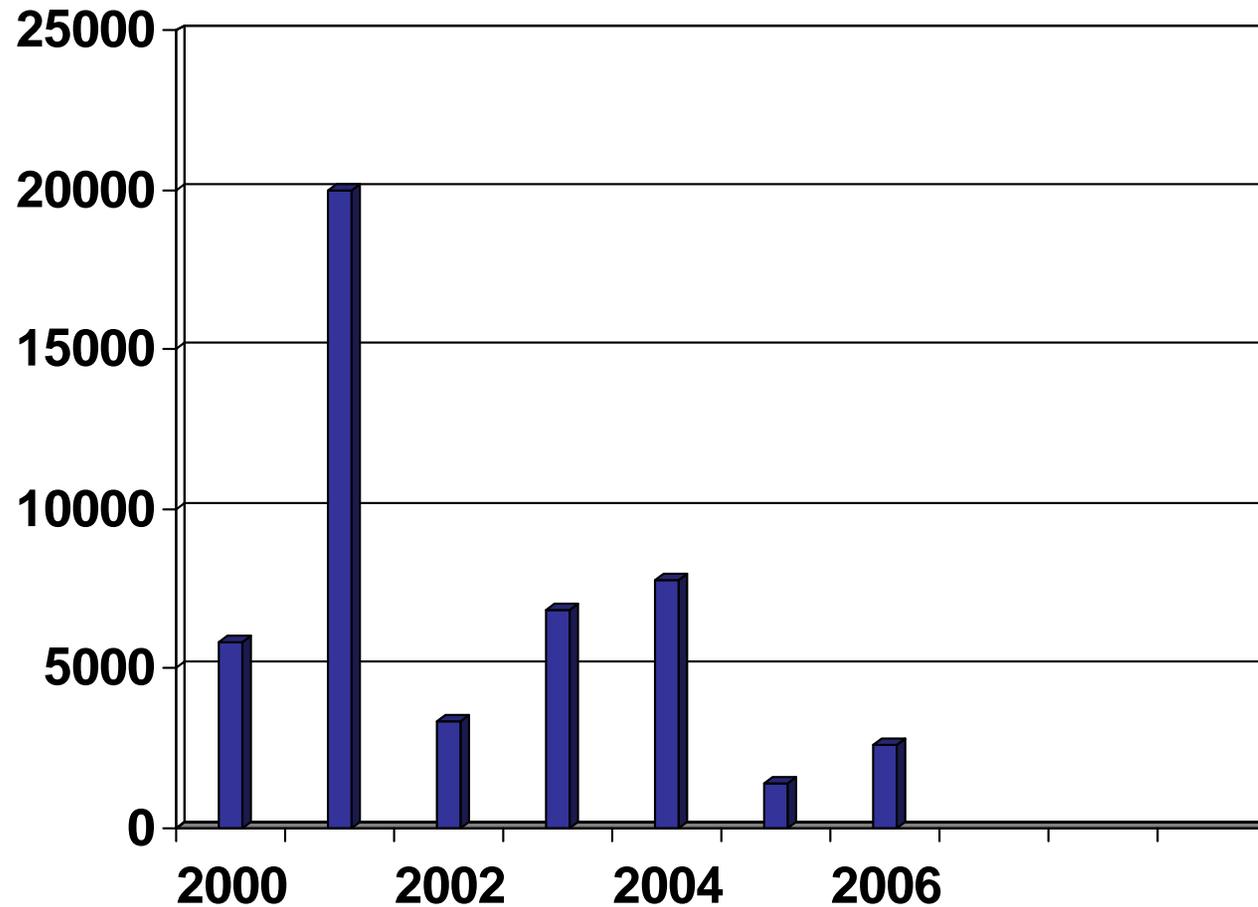


Main Points

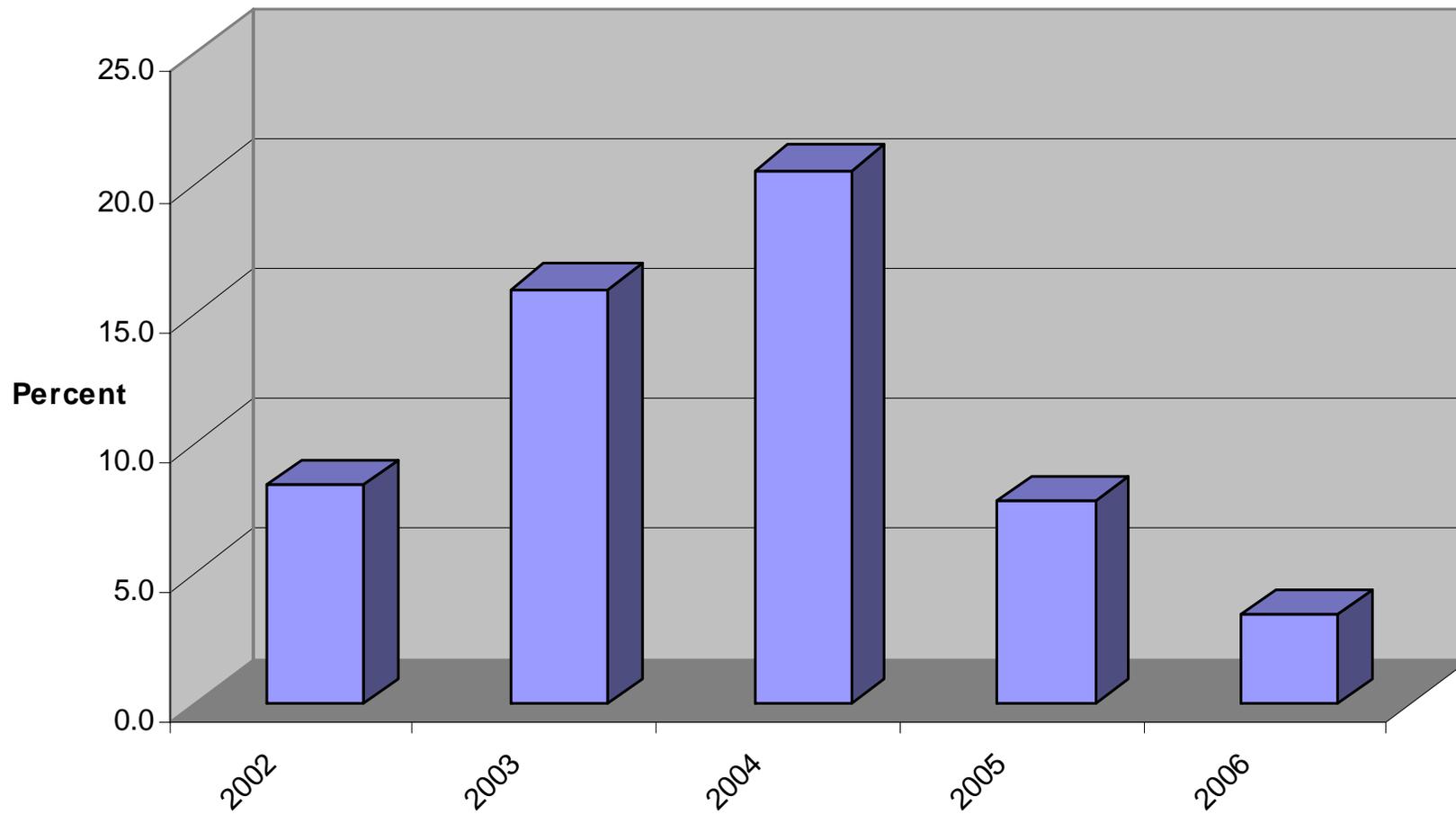
- Less use in winter-time for salmonids
- Shift to greater use for VAMP
- Little use in upstream areas
- Bailed out by favorable hydrology



Winter-run Chinook Estimated Losses at the SWP/CVP



Winter-run Chinook loss as a percentage of the Take Limit since EWA began



Incorporating Change into the EWA Decision Process

- 2001 - revised Winter-run JPE model, result: higher take levels and less need for salmon actions Dec-Feb
- 2002 – Increased use for VAMP, some dual benefits upstream on American River
- 2003 – target multiple species Mar-Jun



Incorporating Change cont.

- 2004 – Biological opinions assess the use of EWA, result: less reliance on EWA for salmon & steelhead, more for delta smelt
- 2005 – Interagency Ecological Program starts new Pelagic Organisms Decline (POD) studies
- 2006 – CBDA funding new models and studies that incorporate EWA Panel Review recommendations in proposals

