

SONOMA COUNTY WATER COALITION

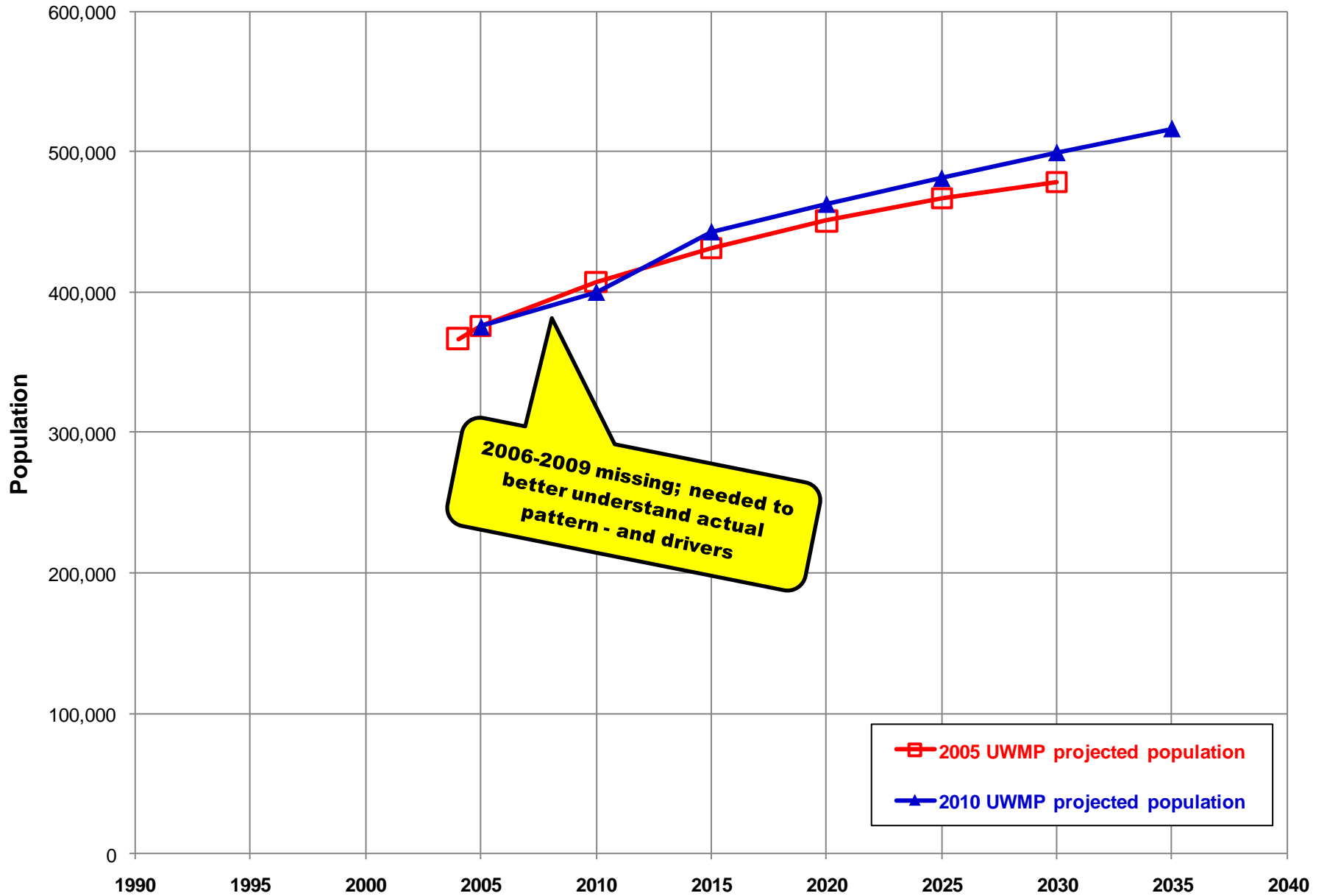
scwatercoalition.org

Evaluation of Water Conservation in Sonoma County Water Agency's Urban Water Management Plan 2010

SCWA provides water to urban retail agencies from the Russian and Eel rivers. Retail agencies supplement this wholesale supply with local potable groundwater, and reclaimed wastewater for landscape irrigation.

**prepared for SCWC by John Rosenblum, Ph.D.
roseenveng@sbcglobal.net**

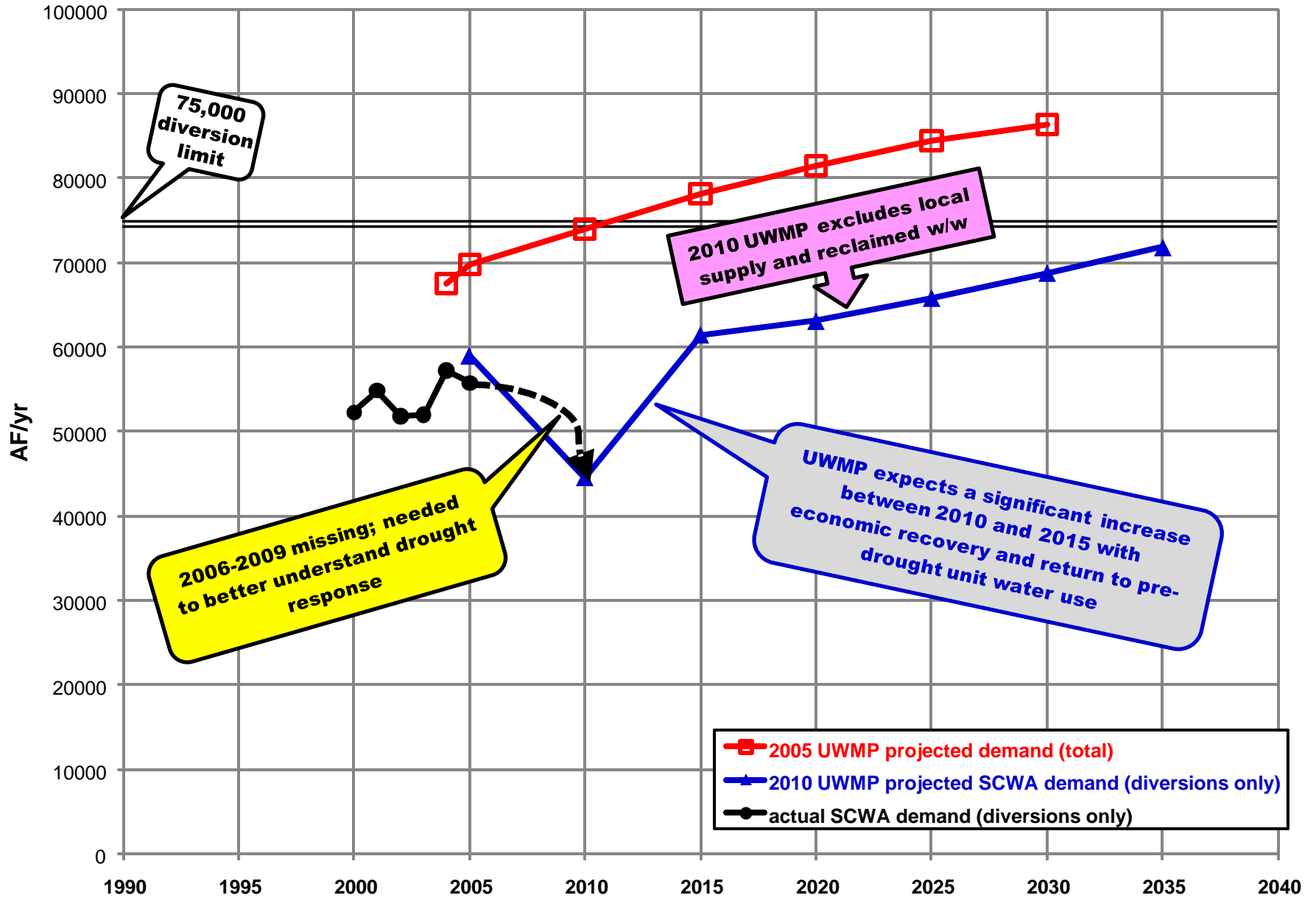
SCWA PRIME CONTRACTOR POPULATION PROJECTIONS



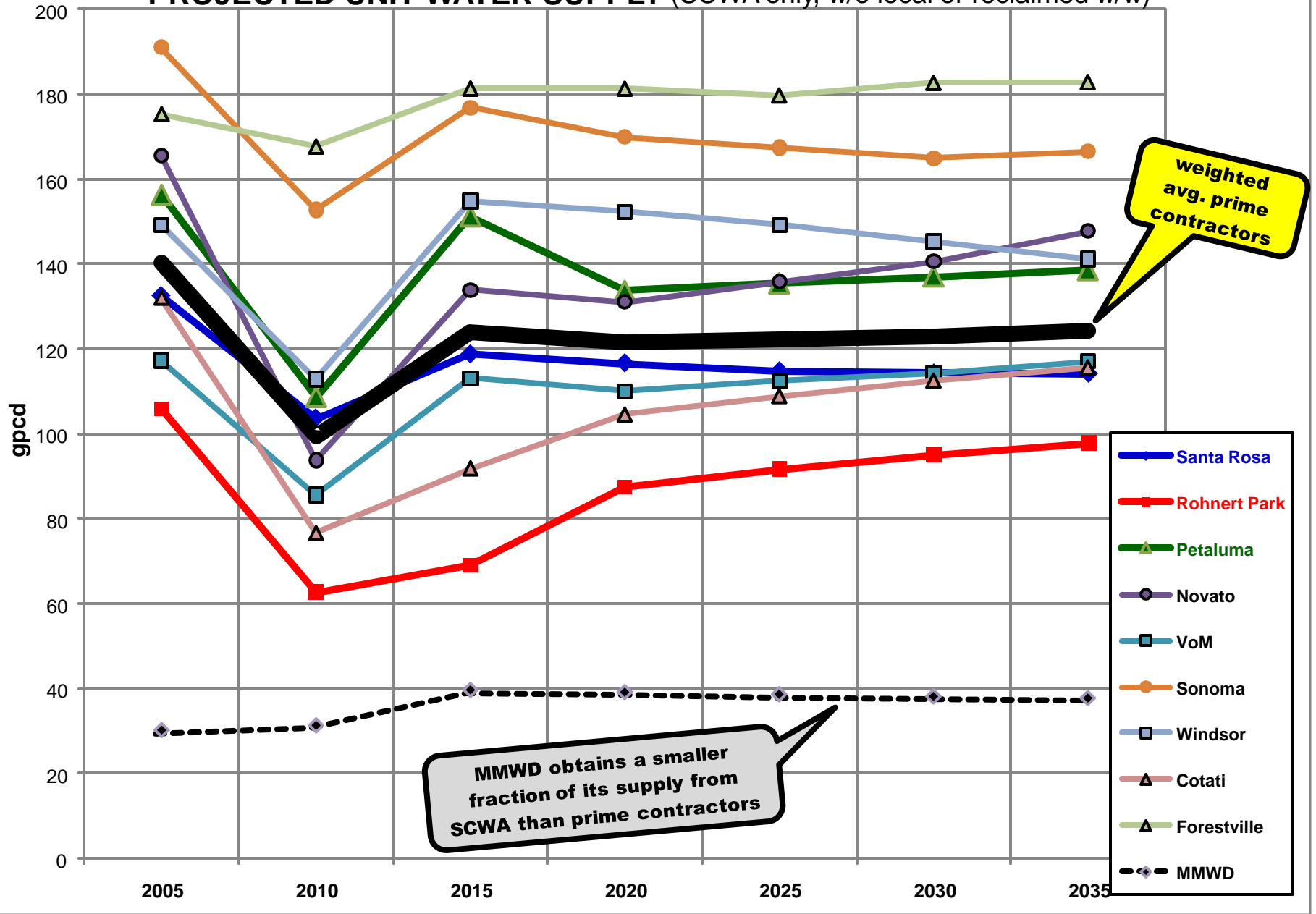
2006-2009 missing; needed to better understand actual pattern - and drivers

—□— 2005 UWMP projected population
—▲— 2010 UWMP projected population

SCWA PRIME CONTRACTORS WATER USE PROJECTIONS



PROJECTED UNIT WATER SUPPLY (SCWA only, w/o local or reclaimed w/w)



weighted avg. prime contractors

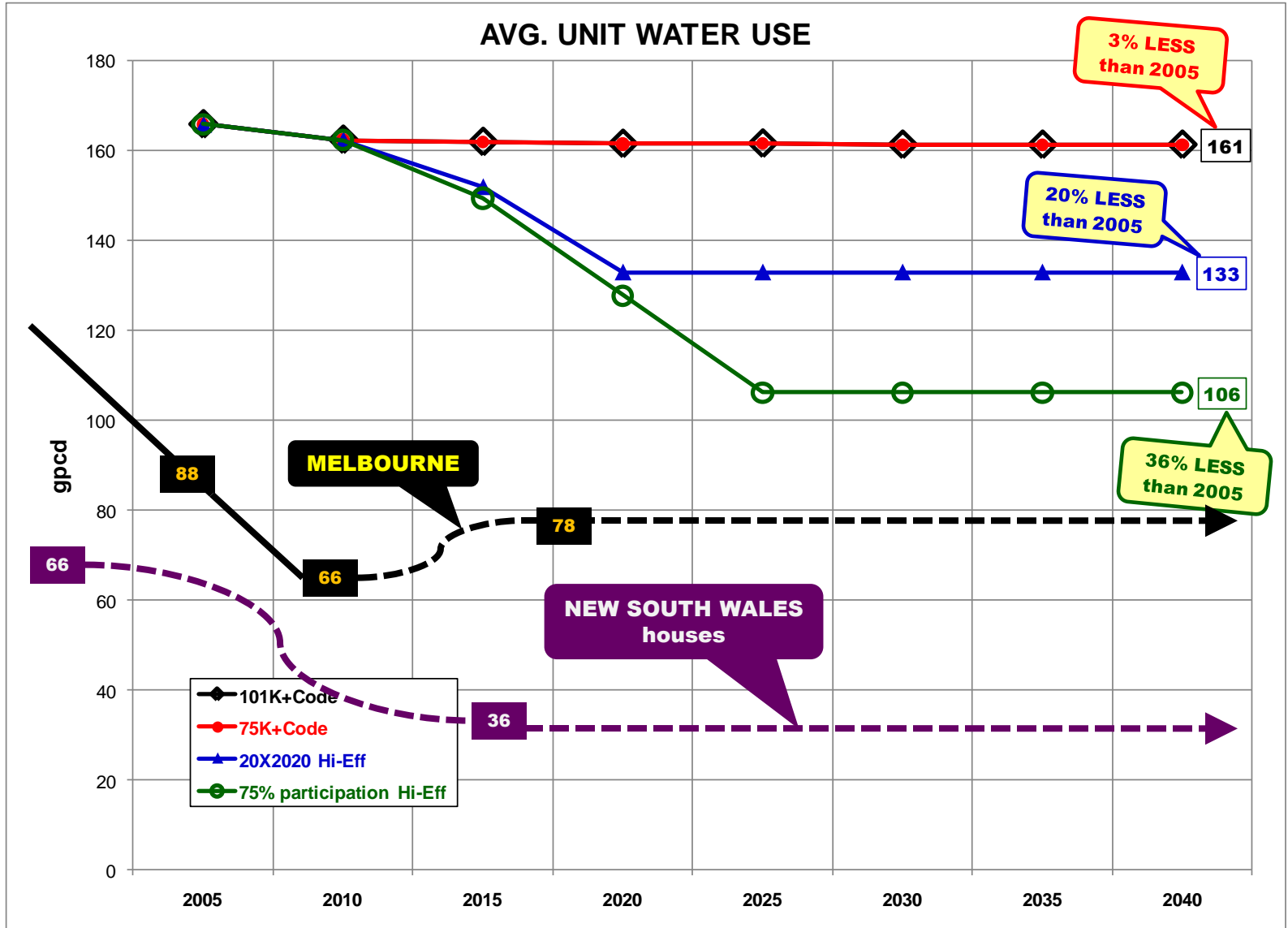
MMWD obtains a smaller fraction of its supply from SCWA than prime contractors

- Santa Rosa
- Rohnert Park
- Petaluma
- Novato
- VoM
- Sonoma
- Windsor
- Cotati
- Forestville
- MMWD

2010-2040 LIFE-CYCLE ANALYSIS FOR AVG. WATER DEMAND PROJECTIONS

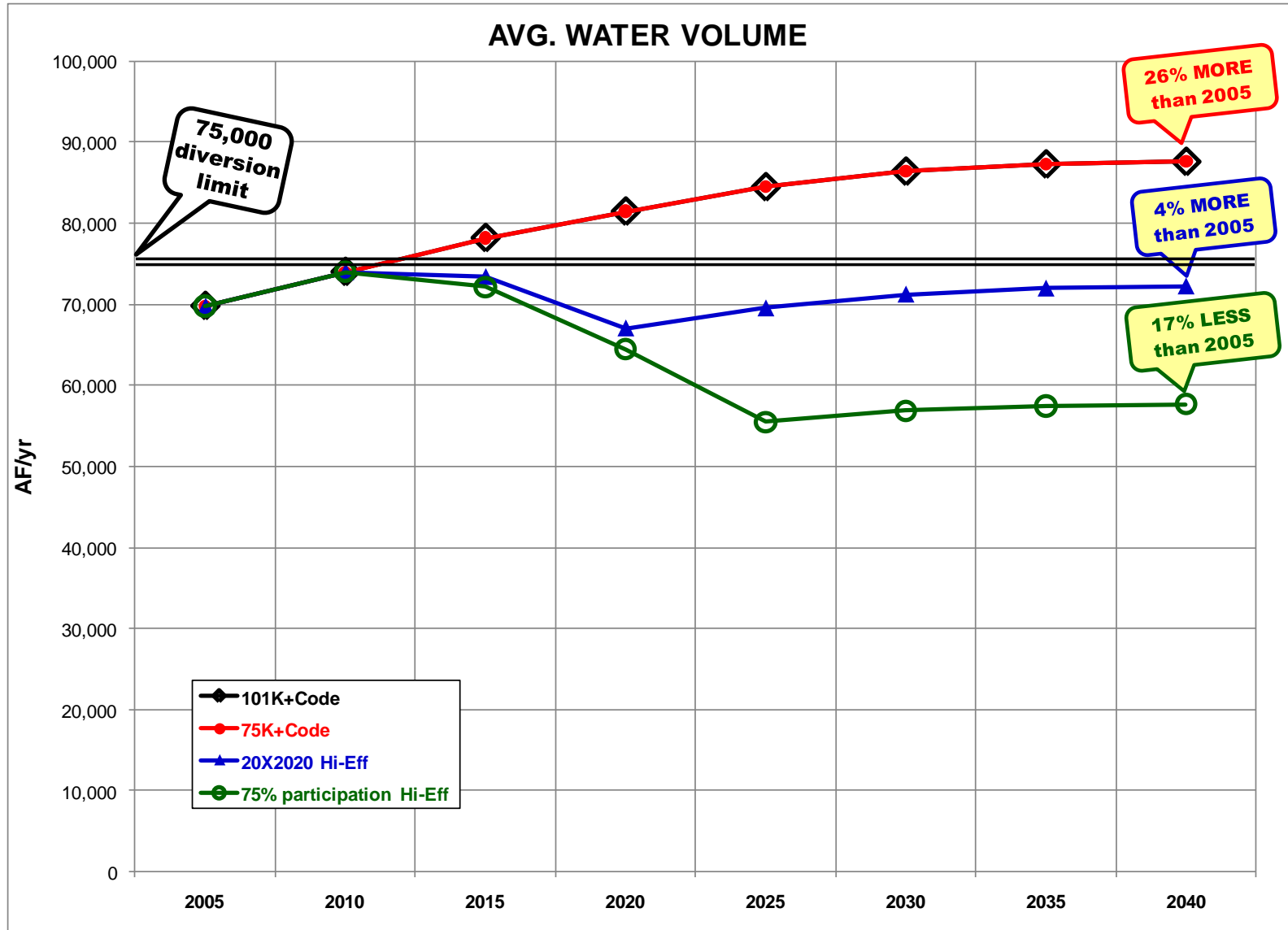
- **Baseline 2005**
- **Implementation beginning 2010**
- **Code efficiency** from UWMP 2005
- **High efficiency** from end-use correlations in this study:
 - 44% participation required to achieve 20X2020 target
 - 75% participation

AVG. UNIT WATER USE PROJECTIONS FOR LIFE-CYCLE



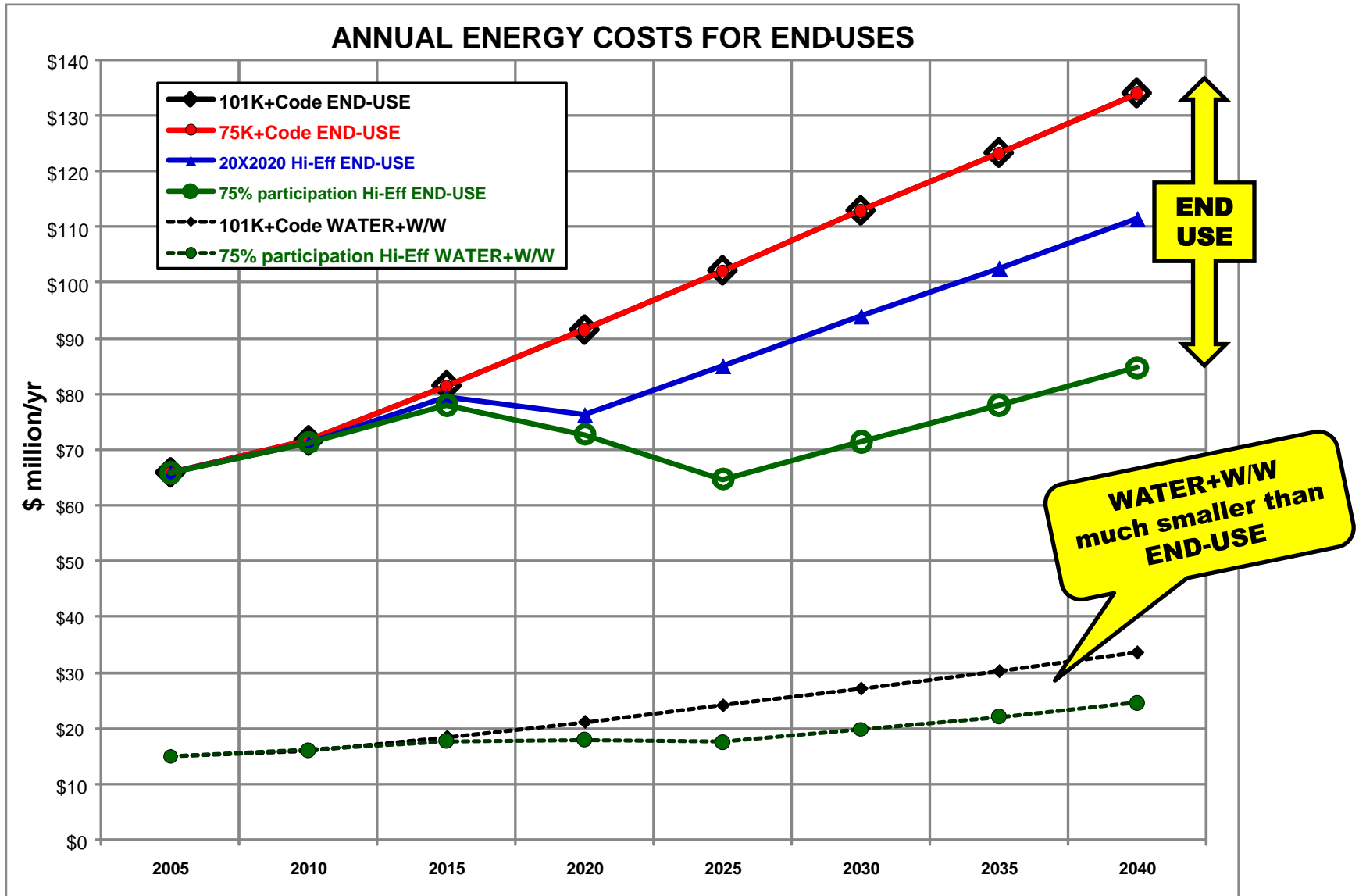
➤ 20X2020 target: 44% Hi-Eff participation achieved in 10 years
 ➤ 75% Hi-Eff participation achieved in 15 years

AVG. WATER VOLUME PROJECTIONS

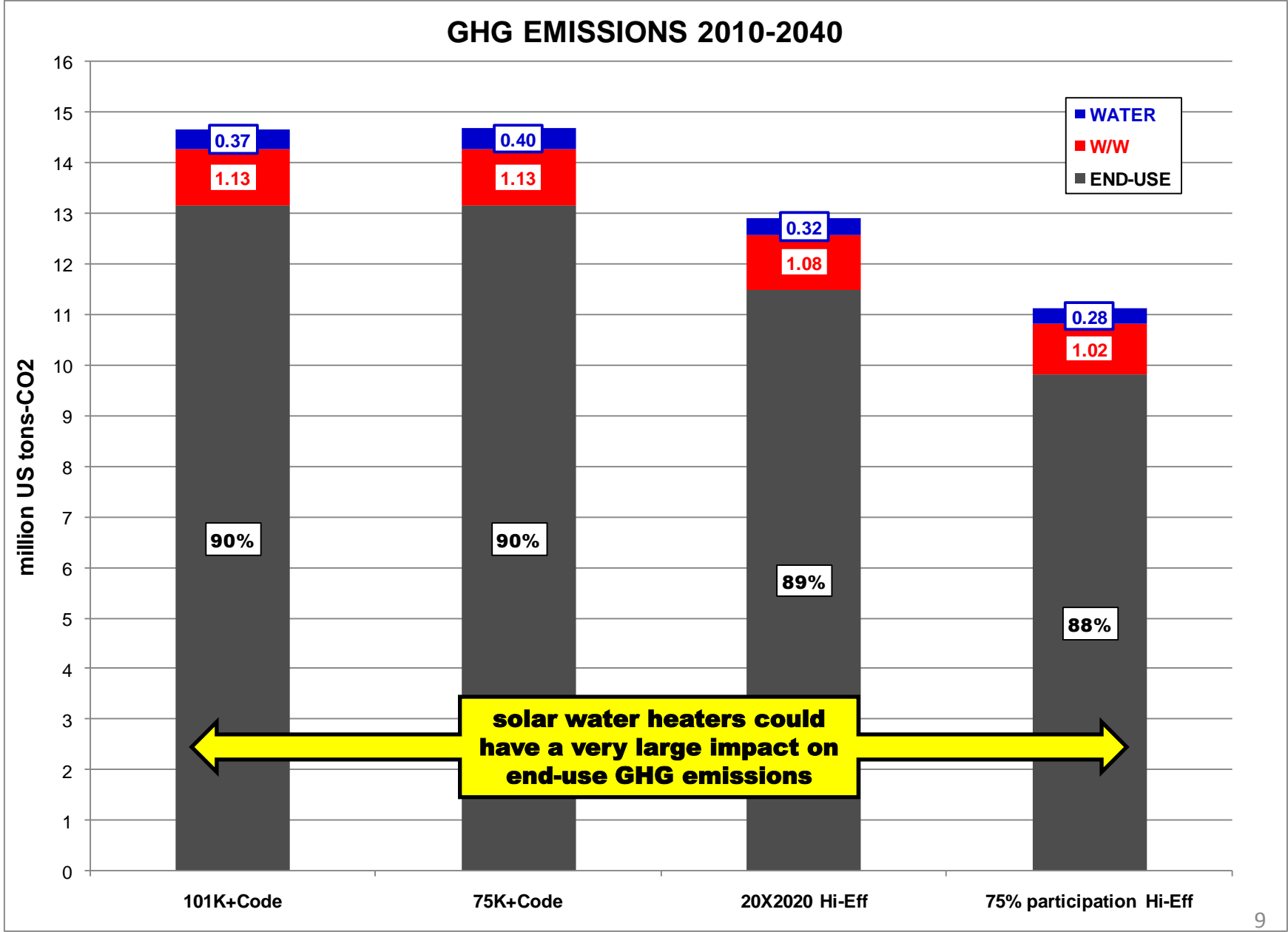


➤ 20X2020 target: 44% Hi-Eff participation achieved in 10 years
 ➤ 75% Hi-Eff participation achieved in 15 years

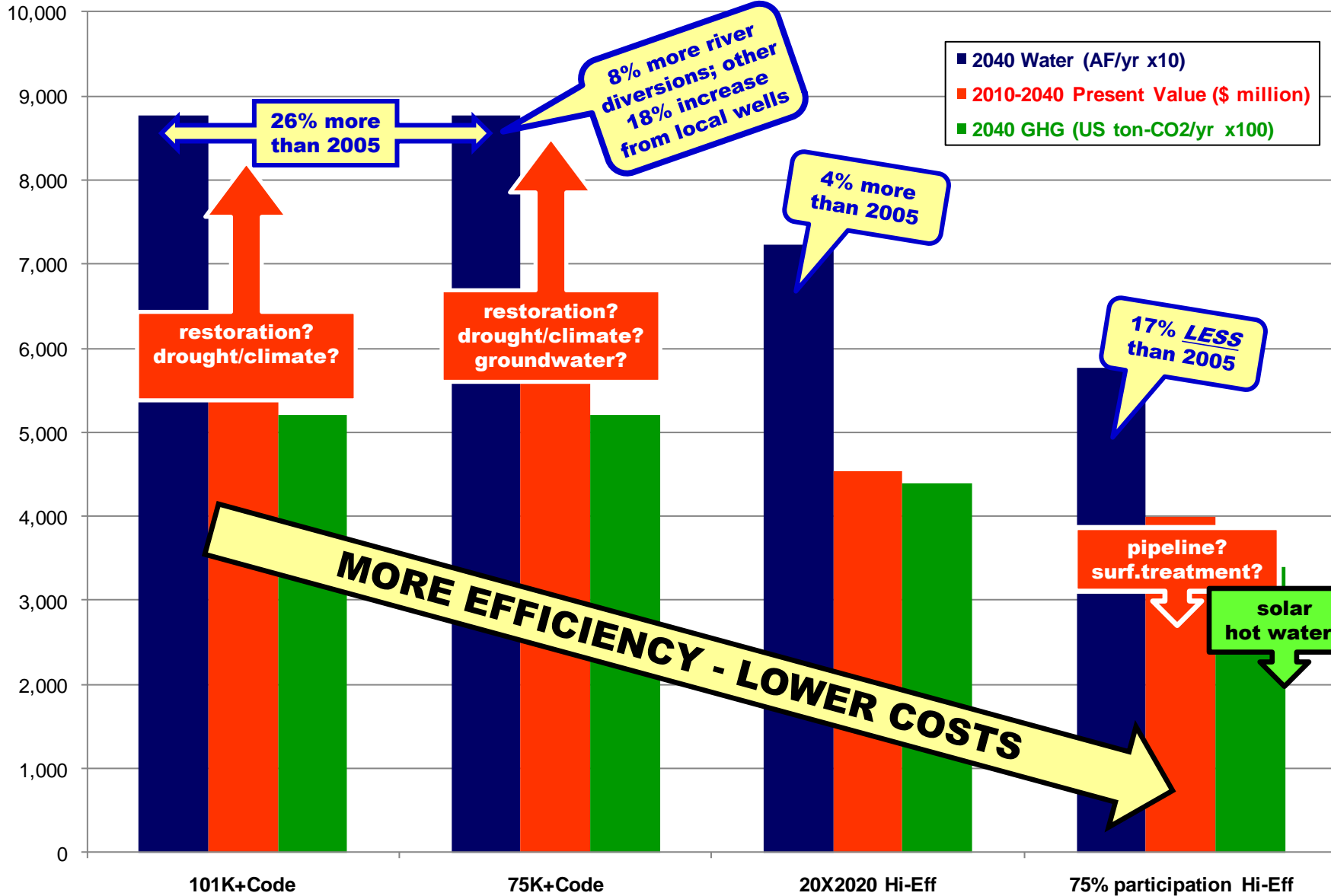
AVG. WATER-RELATED ENERGY COST PROJECTIONS



AVG. WATER-RELATED GHG EMISSIONS PROJECTIONS



2010-2040 PRESENT VALUE, 2040 WATER USE AND 2040 GHG EMISSIONS



THE POINT?

- **Lower infrastructure capacity/costs**
- **Less impact on the Eel & Russian rivers**
- **Lower restoration costs - with a possibility of success**
- **Increased reliability - even with climate change**
- **Lower energy costs and GHG emissions**

THE CHALLENGE: COMMUNICATION & TRANSLATION INTO POLICY

- **Bridging the gap between UWMP projections and feasible conservation**
- **Integration of infrastructure, operational, and restoration costs across the urban water cycle**
- **Prioritizing climate protection**
- **Improving governance of natural resources**

PLANNING AHEAD TO AVOID CRISIS