



California Energy Commission

Energy-Water Nexus: Critical Actions in a Climate Change World

Western States Water Council

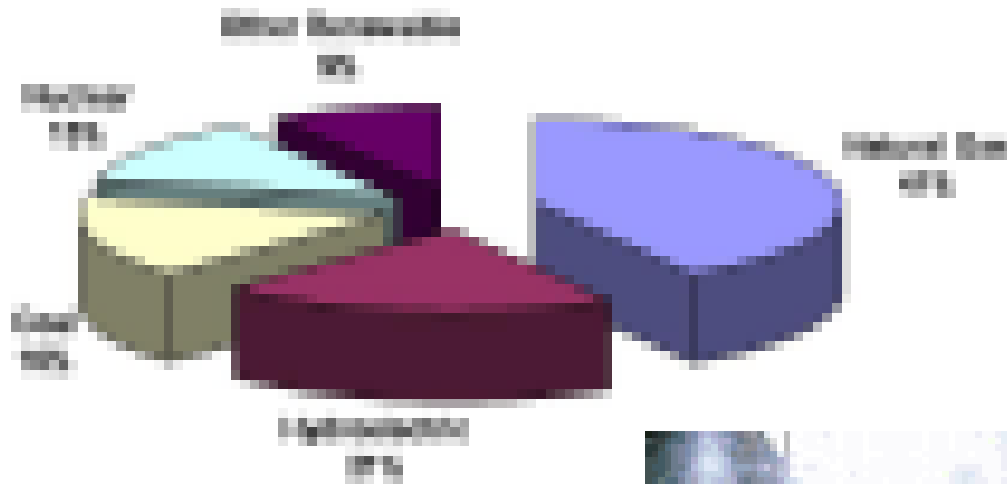
San Diego, CA

November 17, 2009

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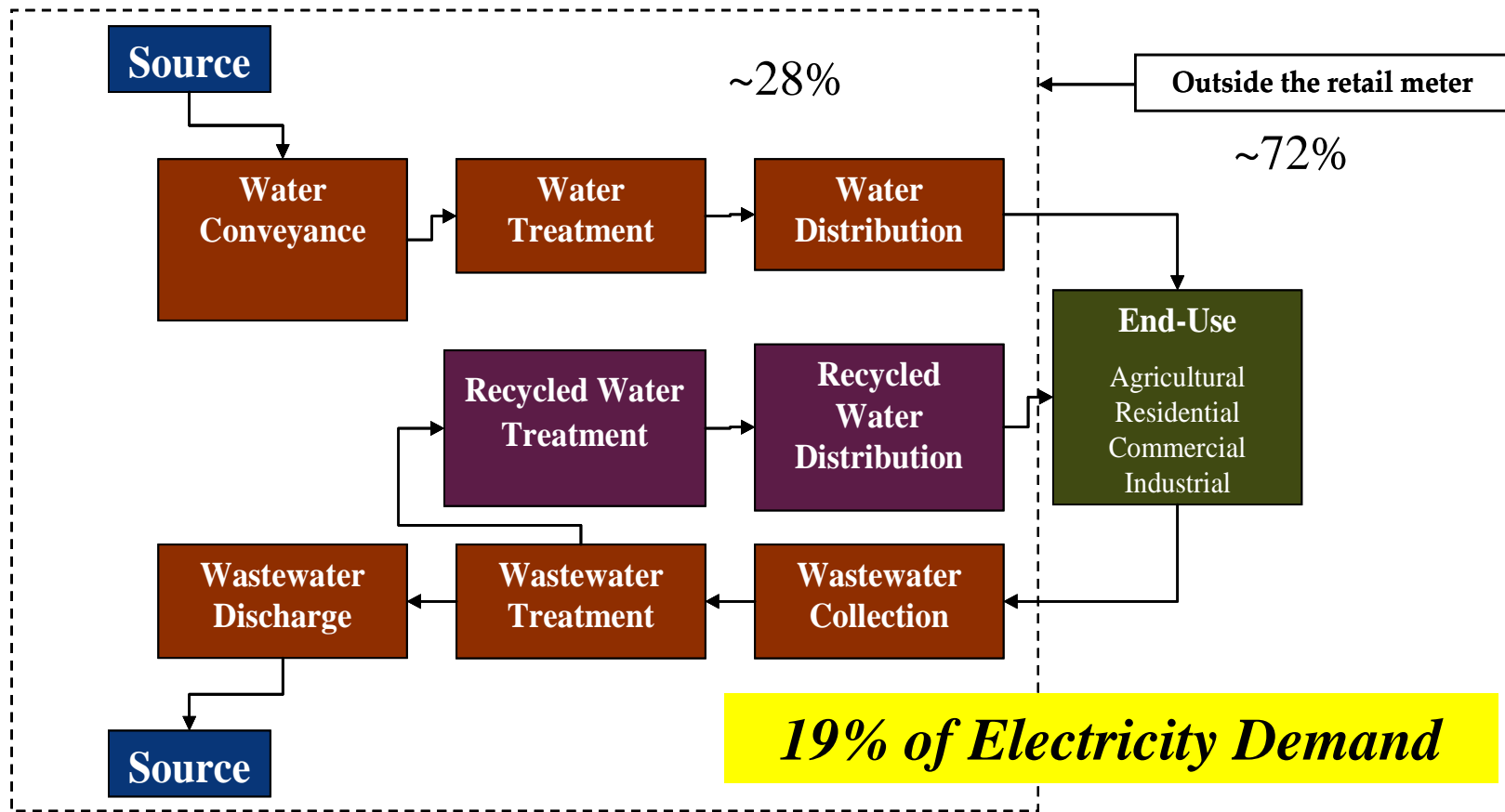


Water to Produce Power





Electricity to Move, Treat and Use Water





California Energy Commission





Shared Challenges

- Growing Demand
- Resource Adequacy
- Supply Diversity
- Infrastructure
- Environmental Quality
- Long-term Uncertainty
- Resource Quality
- Costs and Revenues
- Competing Interests
- Climate Change





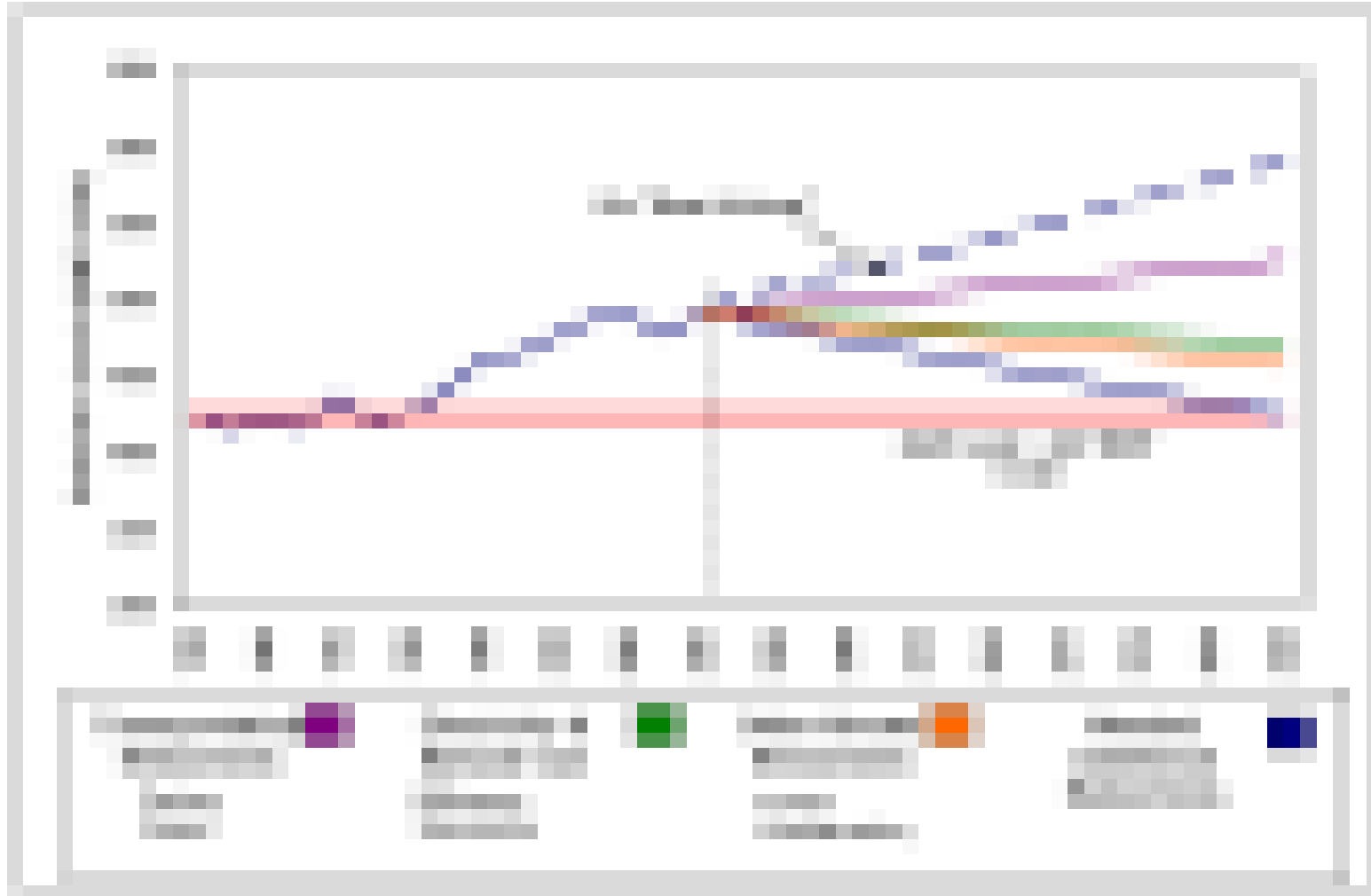
Water-Energy Policies



- 2003 IEPR - Power Generation
 - Non-fresh Supplies or Alternatives
 - Zero Liquid Discharge (cooling)
- 2005 IEPR – System and End Use Conservation and Efficiency
 - Saving Water Saves Energy
 - Reduce Peak Demand
 - Renewable and Self-Generation
- 2007 IEPR – Tools and Implementation (GHG reduction)
 - Evaluation, measurement, verification (conservation)



Achieve AB 32 Goals





AB 32 Scoping Plan -- WETCAT

- Recommended Actions
 - (W-1) *Water Use Efficiency*
 - (W-2) *Water Recycling*
 - (W-3) *Water System Energy Efficiency*
 - (W-4) *Reuse Urban Runoff*
 - (W-5) *Increase Renewable Energy Production*
 - (W-6) *Public Goods Charge for Water*



THINK GLOBALLY – ACT LOCALLY!



Delta Solutions

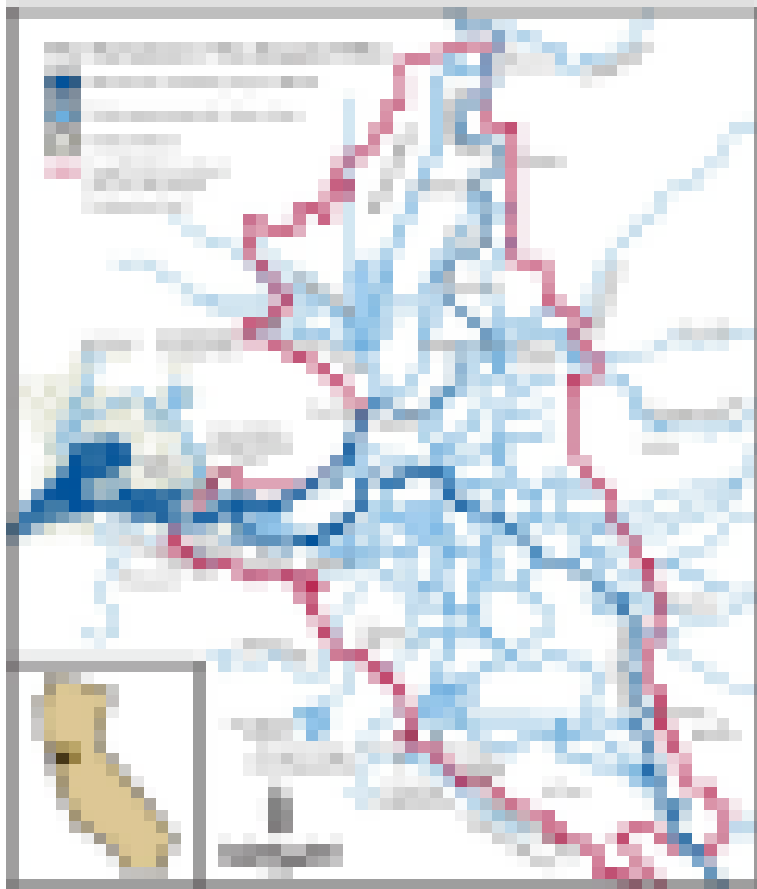


Figure 10 - Delta Solutions - Sacramento-San Joaquin Delta

PPIC Report 2008

- 20 percent per capita water use reduction
- Protection of critical floodplains
- Multi-agency disaster planning
- Bay-Delta Conservation Plan
- Protect and improve water quality
- Improve Water Conveyance
- Increase Storage



Energy Commission Energy Efficiency Programs

- **Building and Appliance Performance Standards**
- **Technical Assistance**
 - Energy Partnership Program - Local Govts, Colleges, Hospitals, Special Districts, Public Care Facilities
- **Energy Project Financing**
 - Can provide up to 100% of your project costs
 - Energy savings are used to repay the loan
- **Public Interest Energy Research**





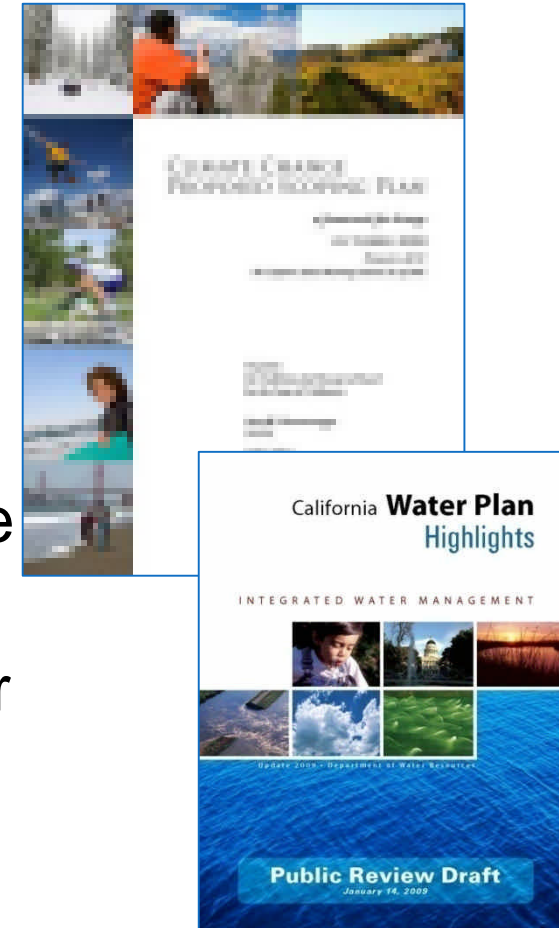
Energy Commission ARRA Efforts

- Energy Efficiency and Conservation Block Grant Program - \$49.6 million
- State Energy Program - \$226.1 million
- Energy Efficient Appliance Rebate Program - \$35.2 million
- For more information:
 - <http://www.energy.ca.gov/recovery/index.html>



Implementation of Laws & Policies

- California Constitution and statutes
- ARB Scoping Plan
 - Water Conservation is expected to reduce GHG's by 1.4 MMTCO₂e by 2020
- State Water Plan – Use and reuse water significantly more efficiently
- AB 1881 (Laird) Landscape Water Efficiency
- Graywater Standards





Summary

- Conserve Resources & Use Them More Efficiently
 - Ensure Reliable, Secure & Diverse Supplies
 - Improve & Protect the Environment
 - Enhance the State's Economy
 - Protect Public Health and Safety
- AND**
- *Achieve GHG Emission Goals*



Be the Change We Want to See in the World!



Information

- Energy Commission's Website:
 - <http://www.energy.ca.gov/>
- EPA WaterSense
 - <http://www.epa.gov/watersense>
- Department of Water Resources
 - <http://www.owue.water.ca.gov/landscape/ord/updatedOrd.cfm/>
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