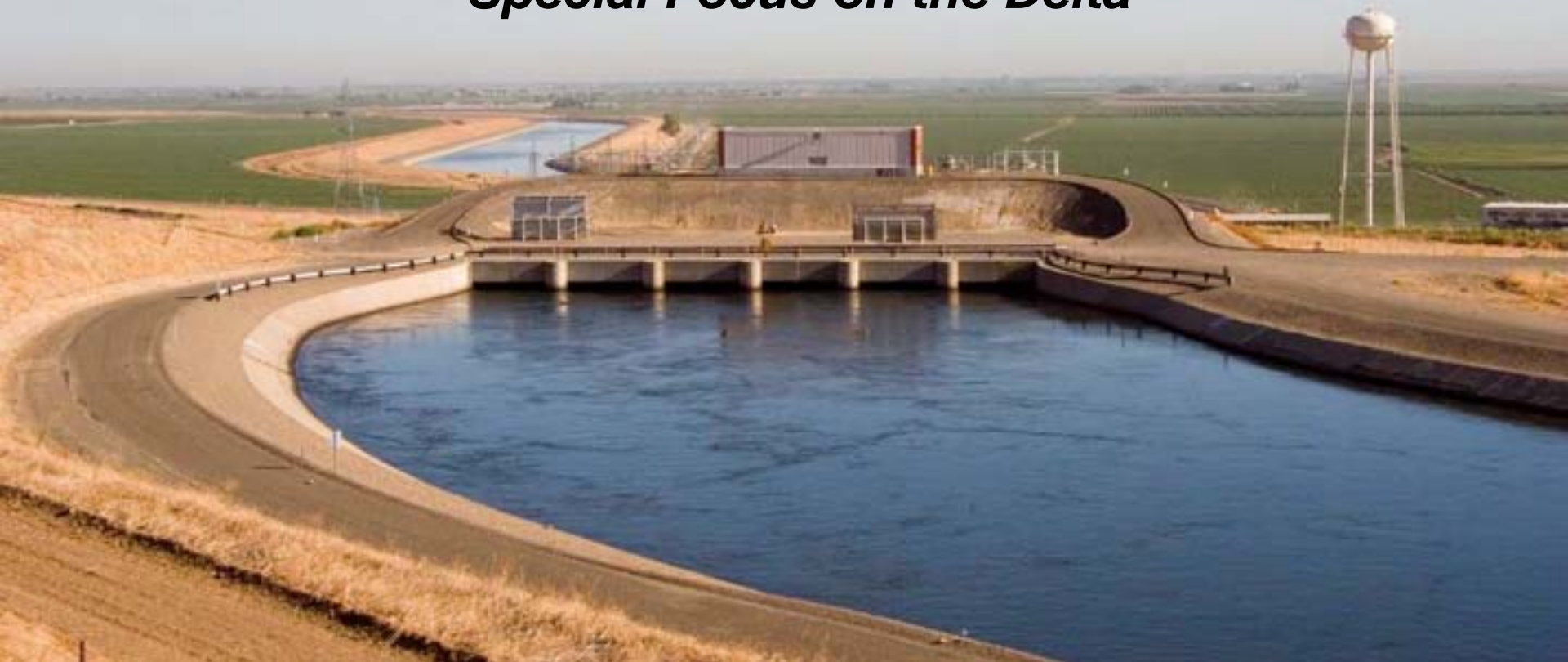


More with Less: Agricultural Water Conservation and Efficiency in California

Special Focus on the Delta



By Heather Cooley, Juliet Christian-Smith, and Peter Gleick

January 31, 2009

CA Agriculture Today



Source: California Farm Bureau



Source: Imperial Valley Press

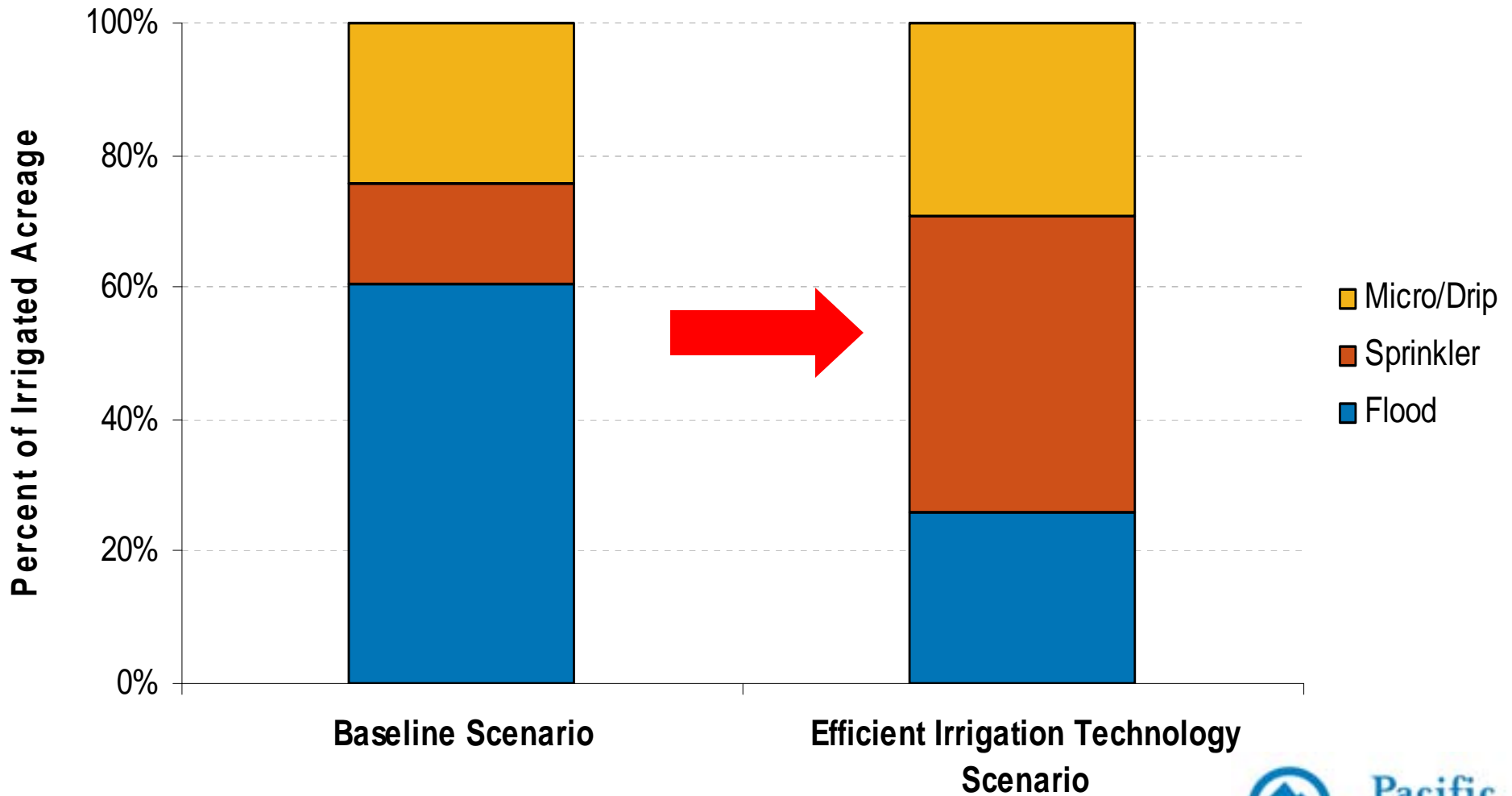
Future of CA Agriculture

- There will very likely be less water available for agriculture in the future.
- Yet, demand for CA's agricultural products in the U.S. and abroad will rise.
- How do grow more food with less water?

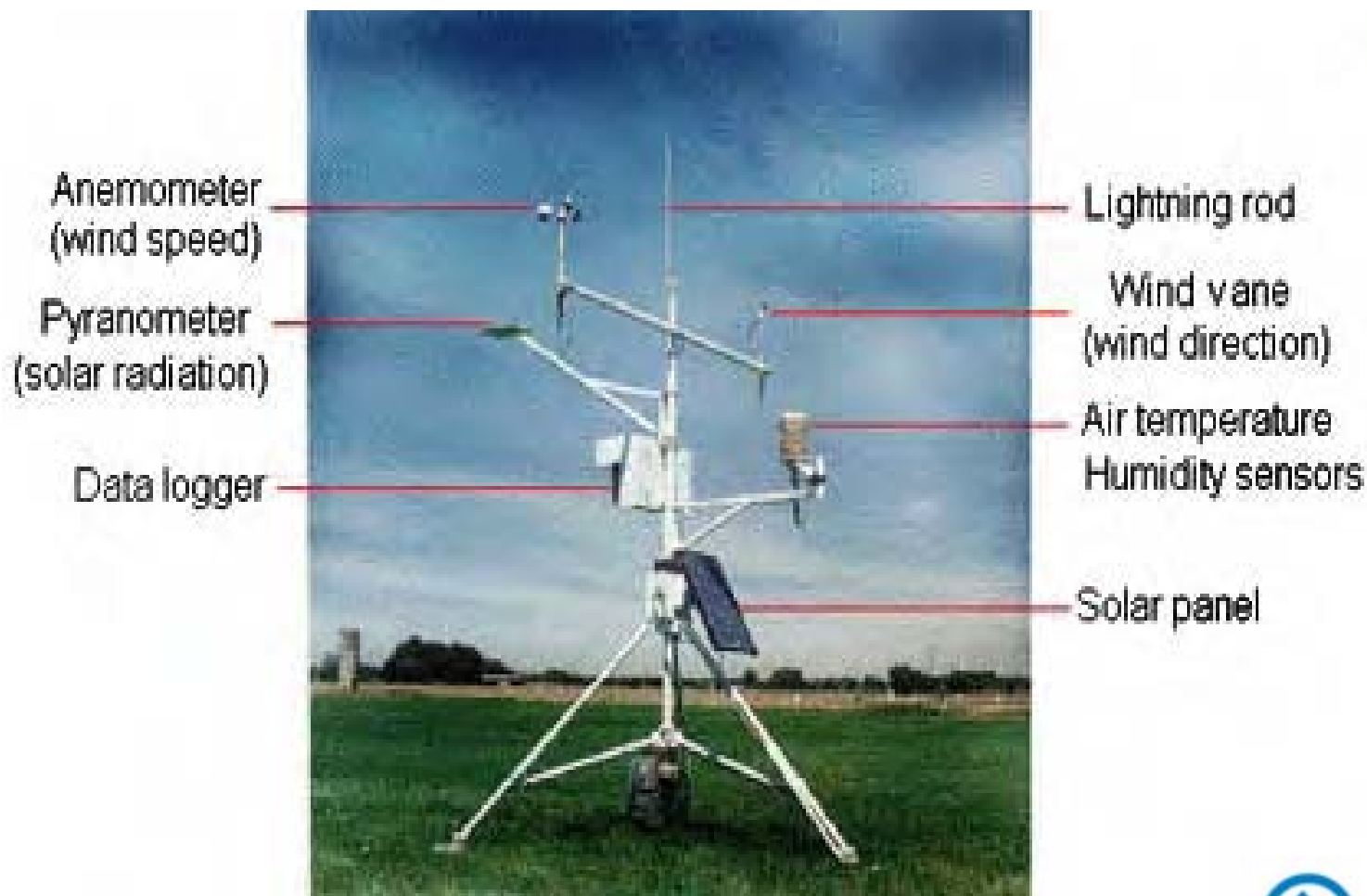
Efficient Irrigation Technology Scenario



Efficient Irrigation Technology Scenario



Smart Irrigation Scheduling Scenario

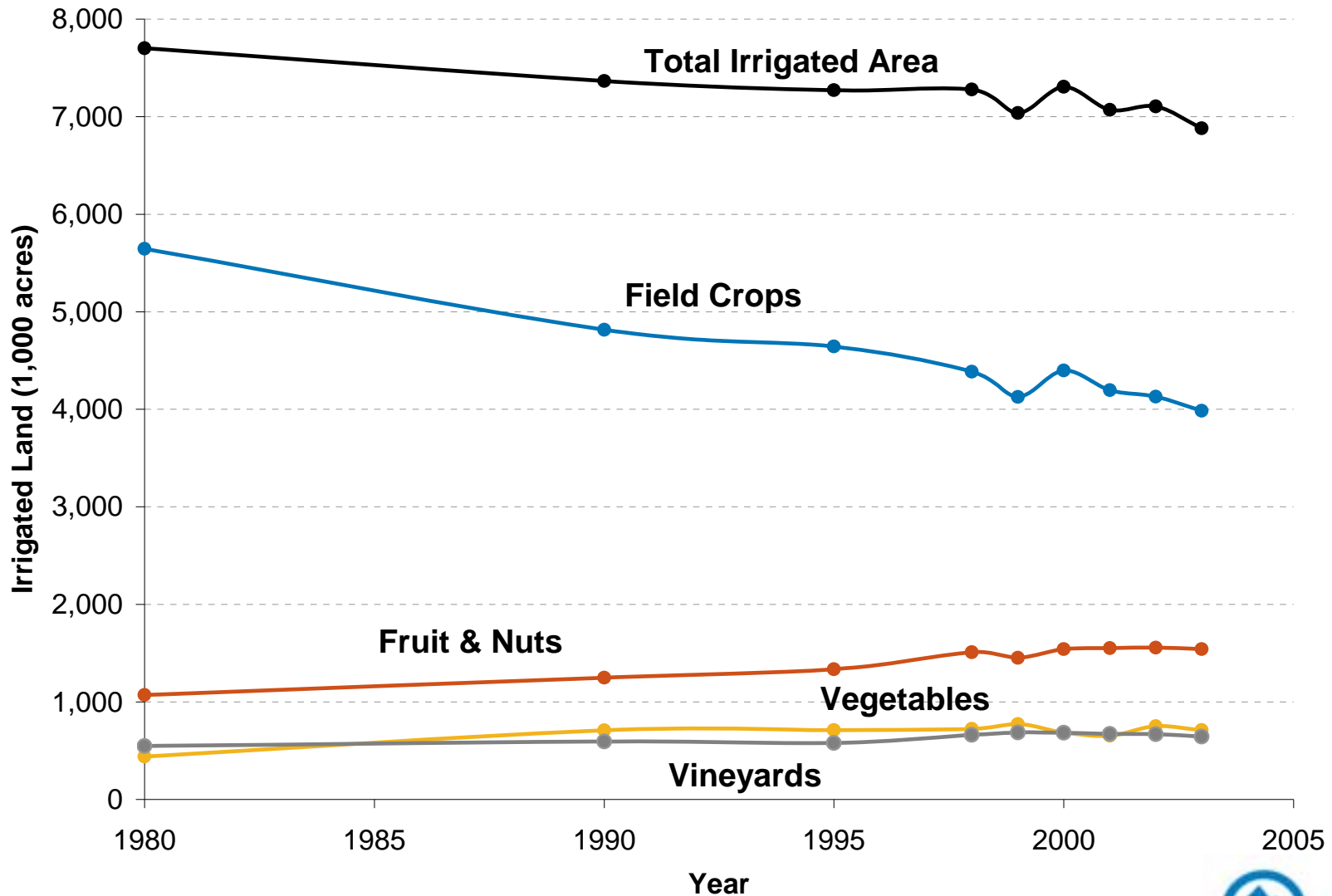


Advanced Irrigation Management Scenario

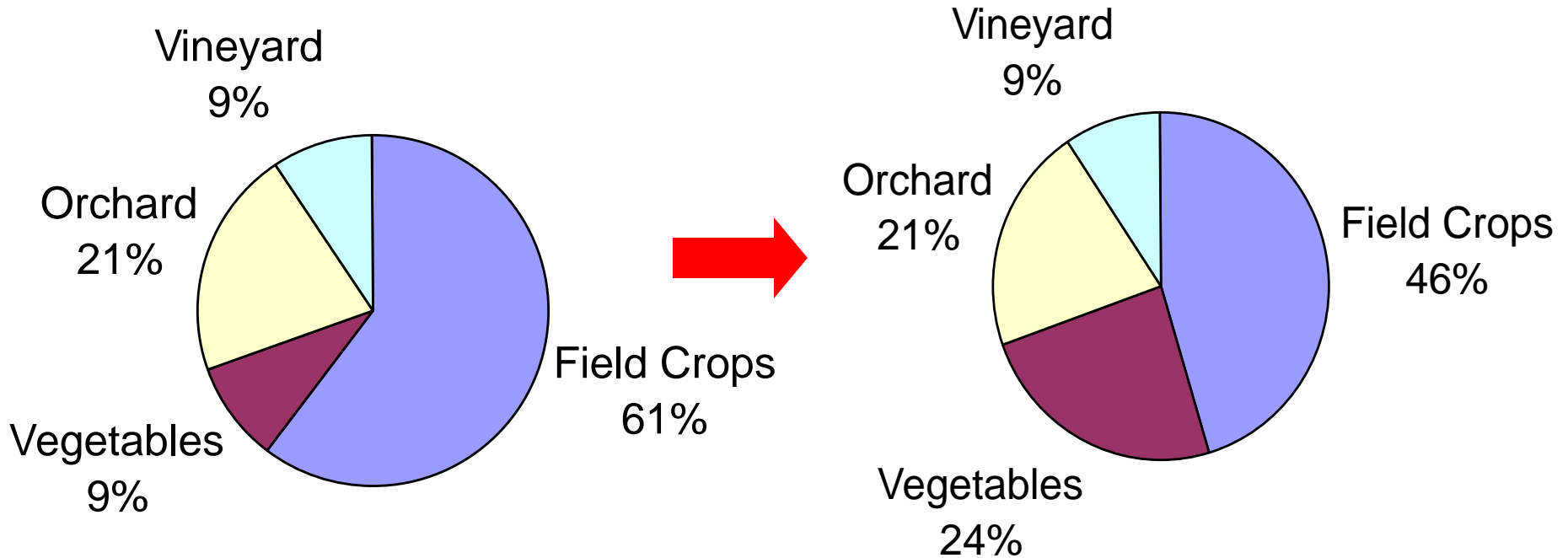
- Regulated deficit irrigation on vines, almonds, citrus, and pistachios



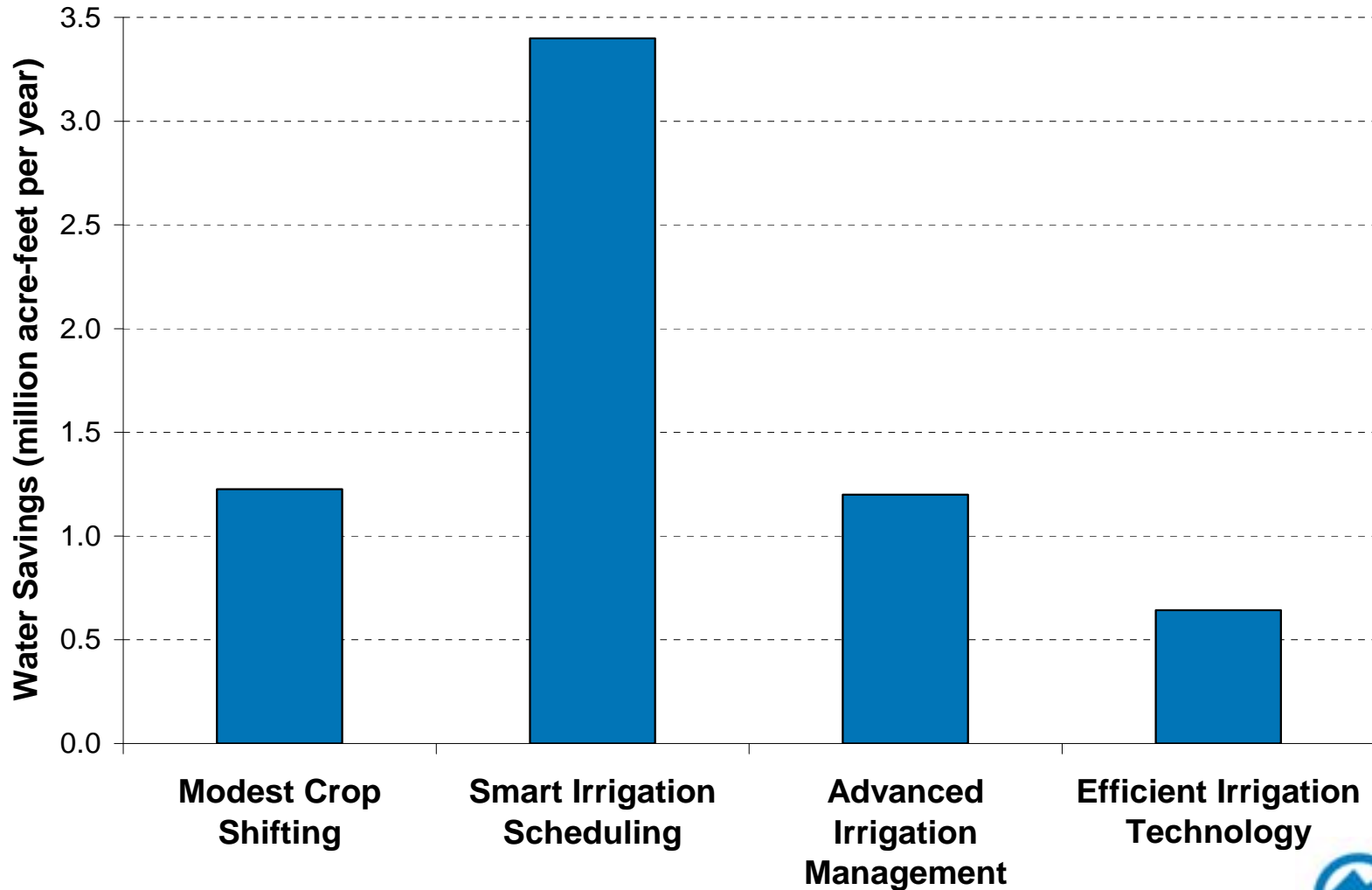
Modest Crop Shifting Scenario



Modest Crop Shifting Scenario



Potential Water Savings



How Can We Move Forward to Capture the Efficiency Improvements?

- **Financial Incentives**
- **Data and Information**
- **Educational Opportunities**
- **Legal and Institutional Improvements**

Financial Opportunities

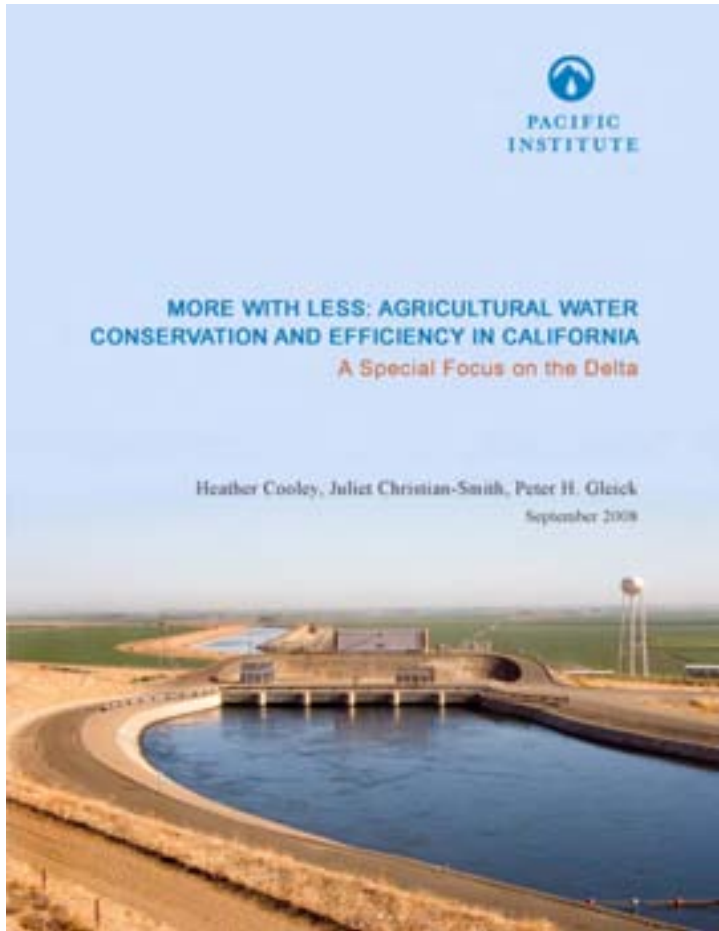
- Provide rebates or incentives to farmers who implement conservation measures that result in a net water or energy savings.
- Reduce or realign subsidies (both direct and indirect).

Data Opportunities

- Create a statewide system of data monitoring available to all users, especially for water use.
- Use satellite and other technology to improve data collection and analysis, particularly for annual assessments of crop area and crop consumption.

Educational Opportunities

- Expand water-efficiency information, evaluation programs, and on-site technical assistance provided through Agricultural Extension Services and other agricultural outreach efforts.
- Expand networks to provide farmers with immediate meteorological and hydrological information on climate, soil conditions, and crop water needs.



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Comments? Suggestions?

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