



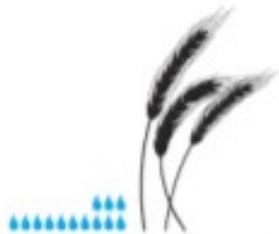
California's Water Footprint and Trends

Heather Cooley (Pacific Institute) and
Julian Fulton (Energy and Resources
Group, UC Berkeley)

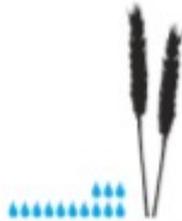
**Sustainable Water Resources
Roundtables
November 20, 2014**



Water Footprint Examples



650 Barley
liters of water for one pound (500g)



650 Wheat
liters of water for one pound (500g)



1400 Sorghum
liters of water for one pound (500g)



2500 Millet
liters of water for one pound (500g)



650 Toast
liters of water for one package (500g)



750 Cane Sugar
liters of water for one package (500g)



90 Tea
liters of water for one pot (750ml)



840 Coffee
liters of water for one pot (750ml)



2500 Burger
liters of water for one burger (330g beef)



4650 Beef
liters of water for one steak (300g)



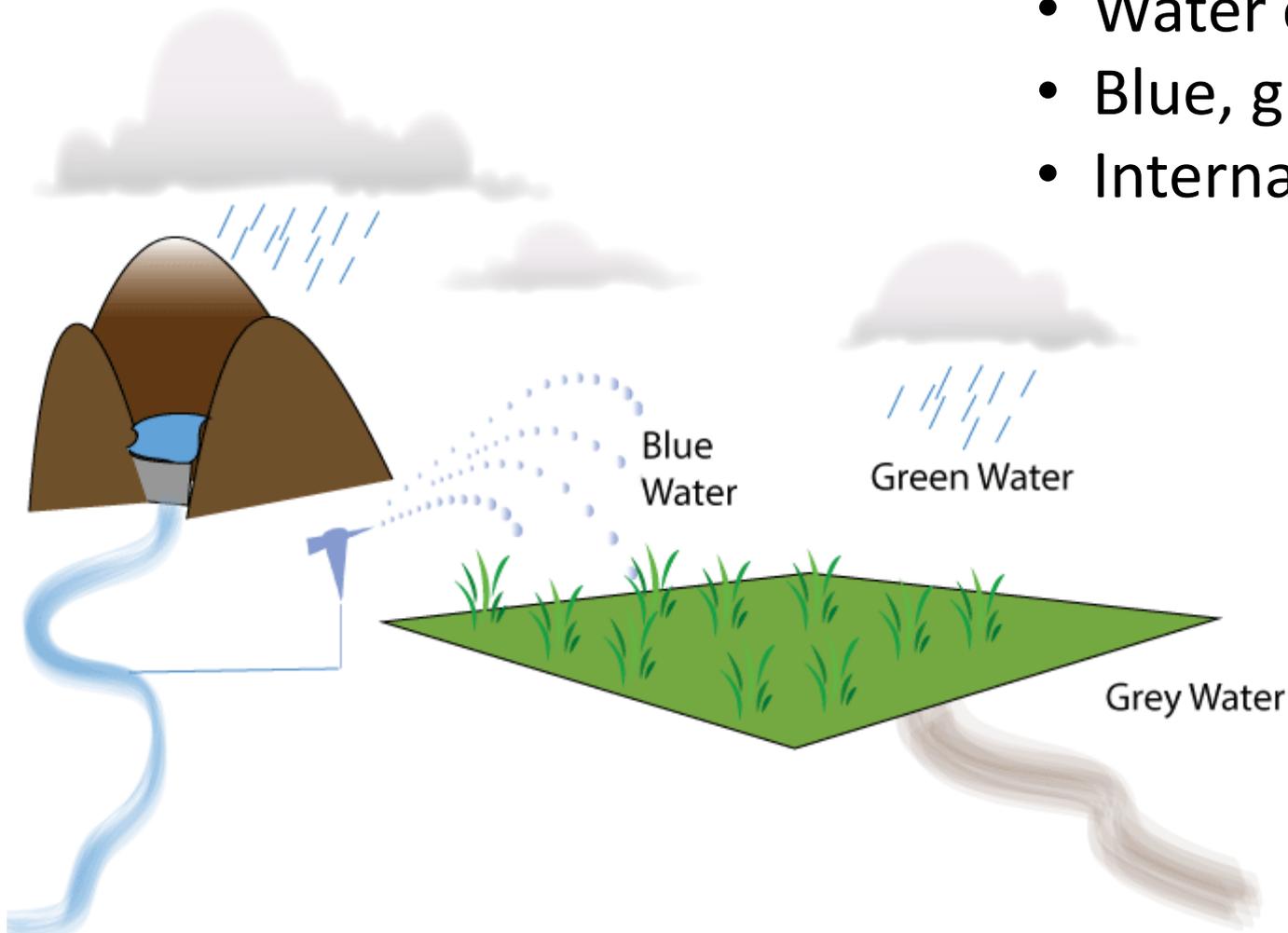
1000 Milk
liters of water for one liter



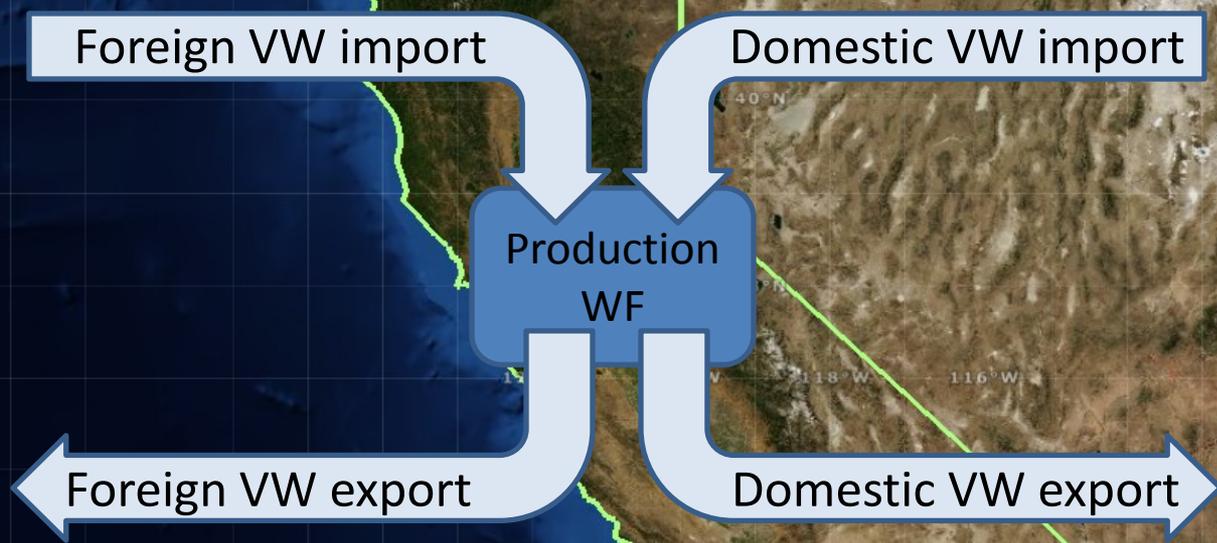
2500 Cheese
liters of water for one big piece (500g)

Water Footprint Definitions

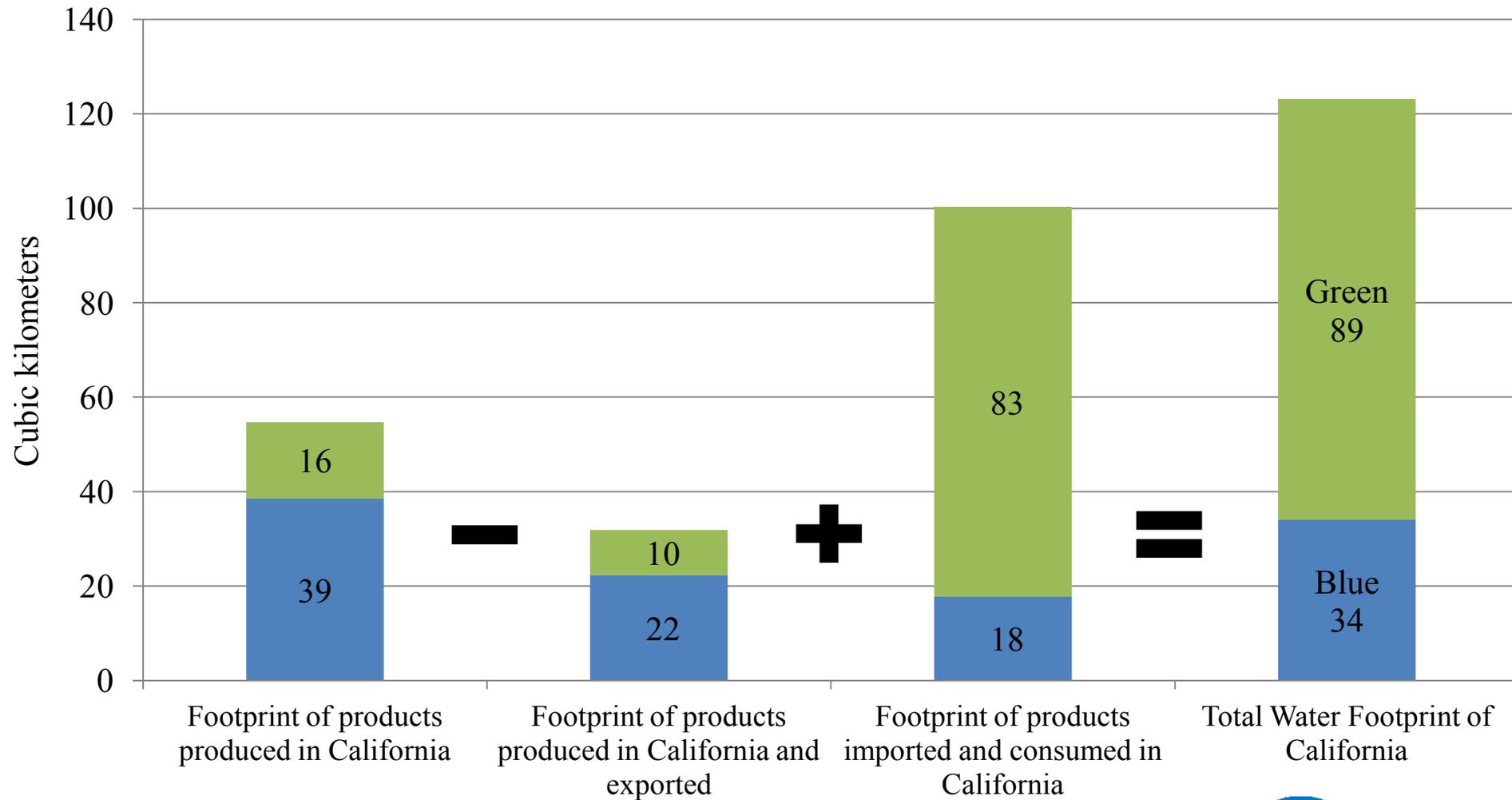
- Water consumption
- Blue, green, and grey
- Internal and external



Water Footprint Accounting Framework

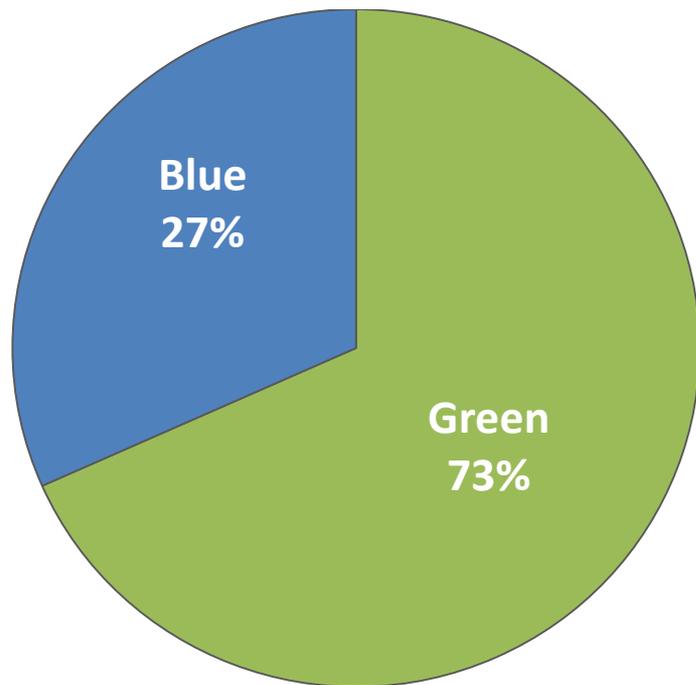


California's Water Footprint in 2010

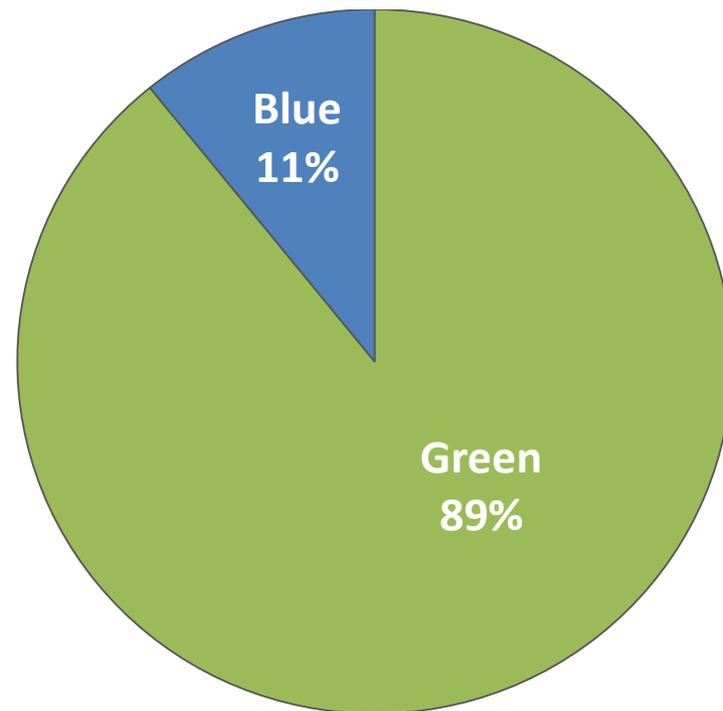


Water Footprint, by Color

California

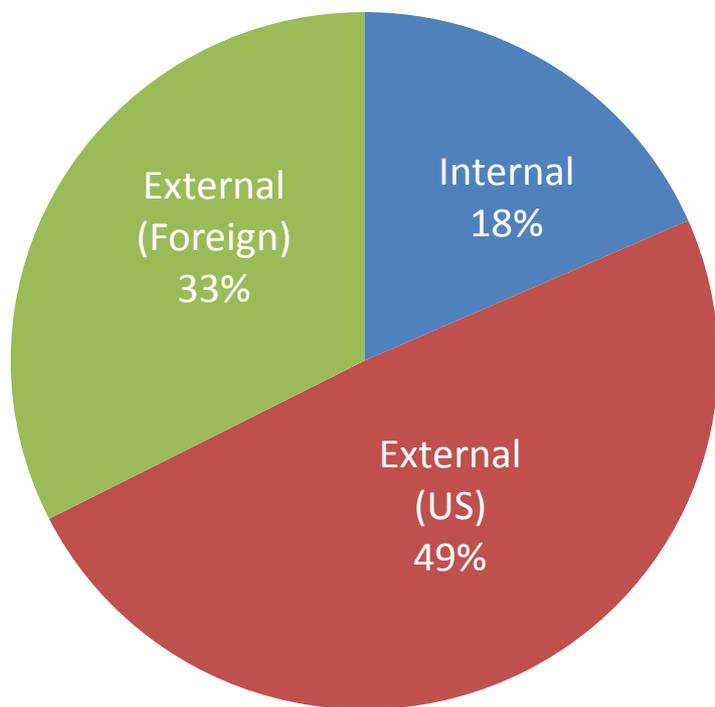


United States

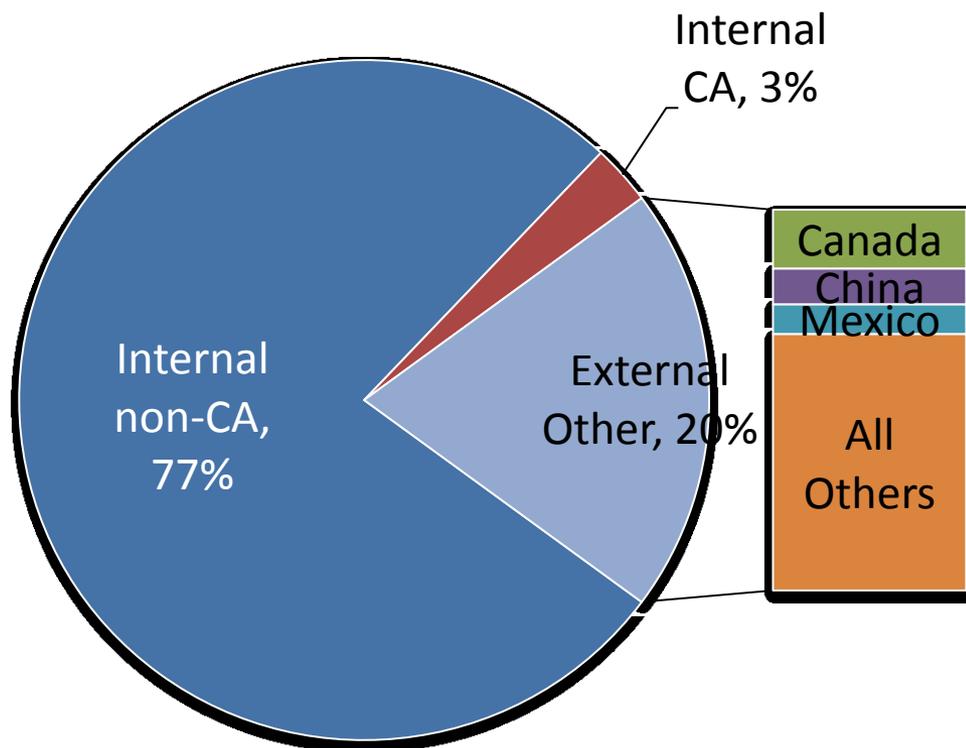


Water Footprint, by Region

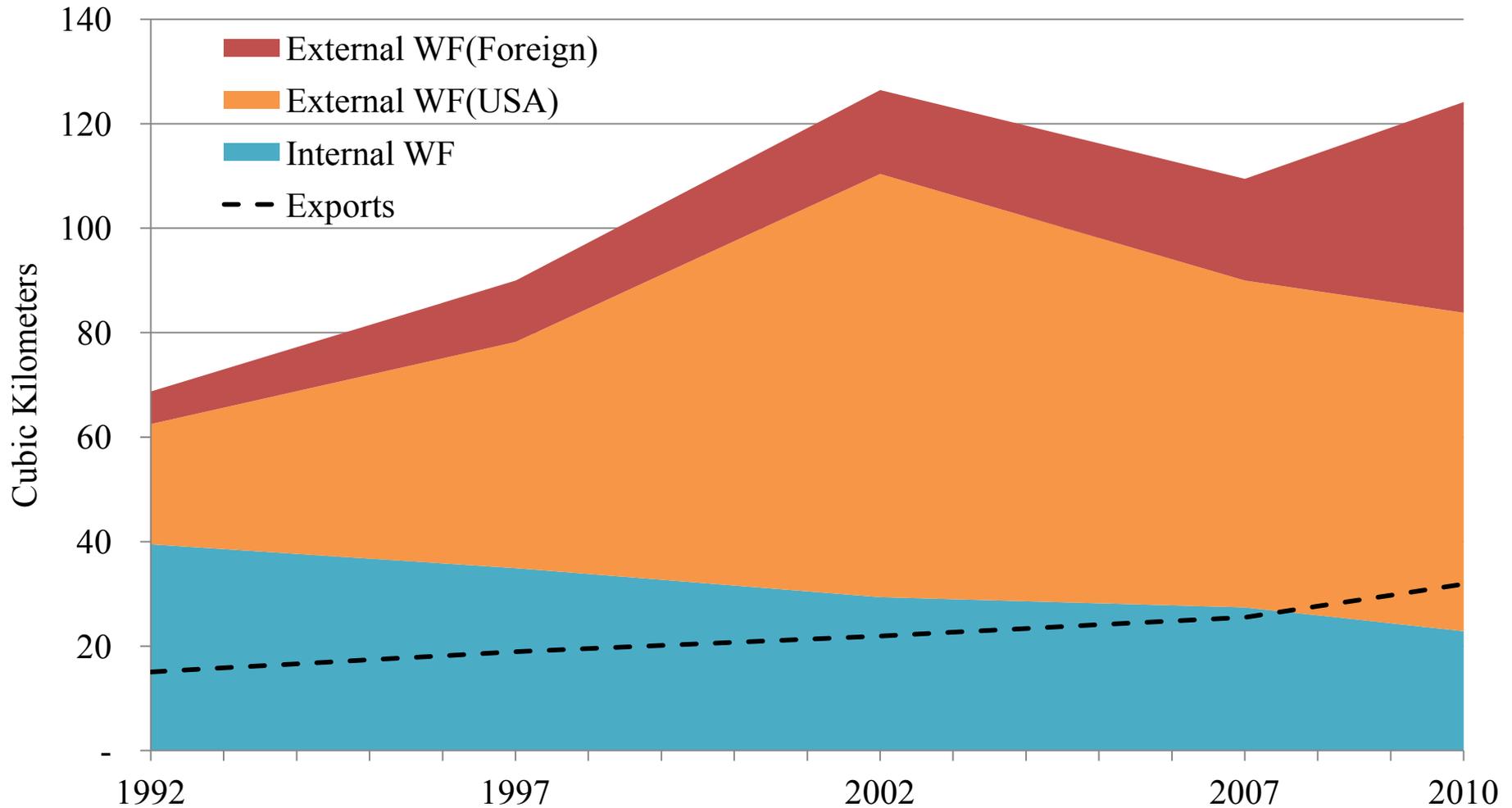
California



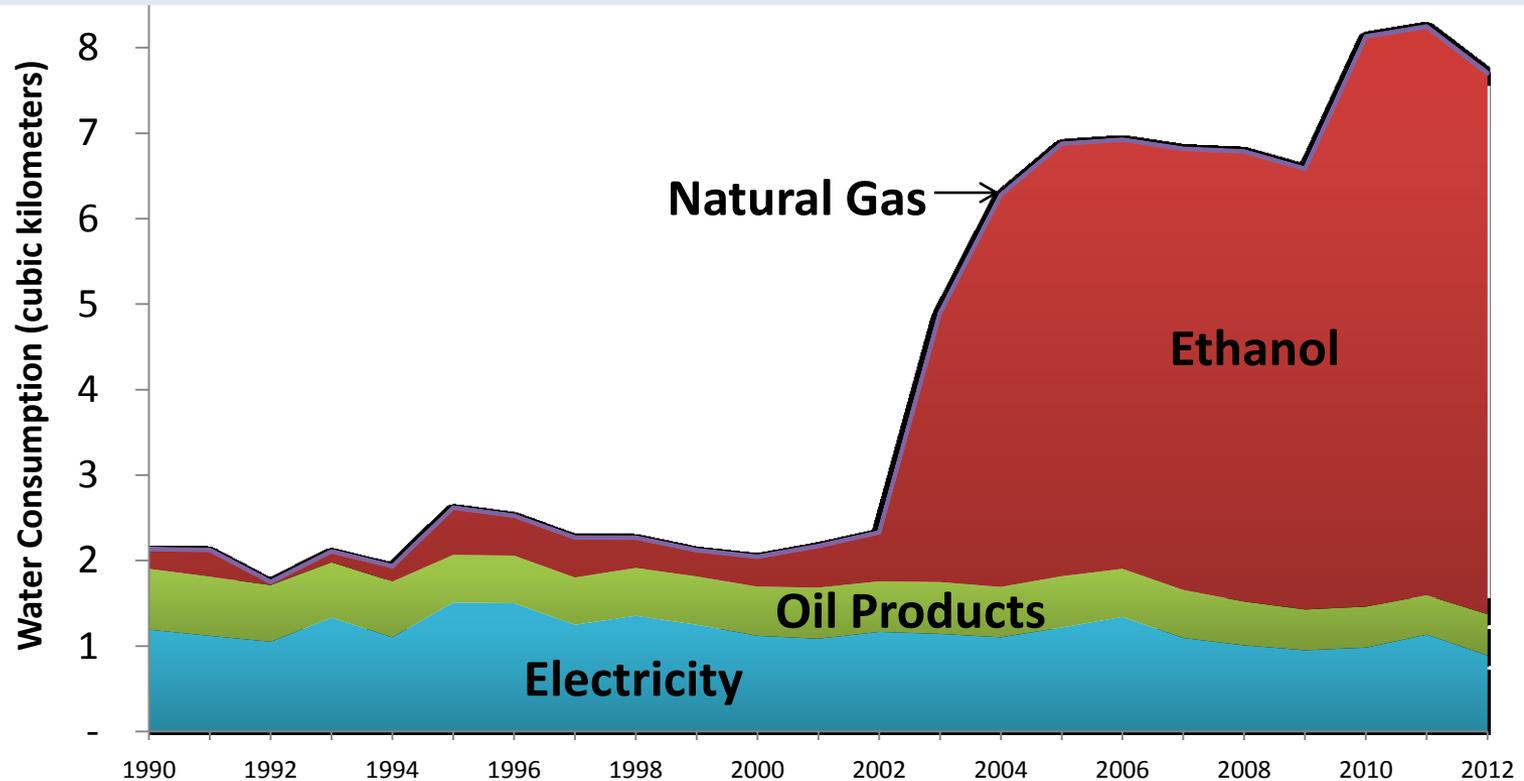
United States



California's Water Footprint, 1992-2010



Water Footprint of Energy



Sum Total (km³)	2.1	2.1	1.8	2.1	1.9	2.6	2.5	2.3	2.3	2.1	2.0	2.2	2.3	4.9	6.3	6.9	6.9	6.8	6.8	6.6	8.1	8.3	7.7
Green EWF (%)	10	13	2	5	8	19	16	18	14	13	15	20	22	57	65	66	65	67	69	70	73	72	73
External EWF (%)	51	54	45	40	48	48	51	50	44	46	42	57	55	77	83	83	81	87	87	86	88	86	89

Note: 1 km³ = 810,713 acre-feet



Key Findings

- California...
 - is a net virtual water importer
 - exports half of the blue water that goes into production
 - depends on blue water more than the rest of the United States
- California's water footprint...
 - is growing faster than population
 - of energy is growing and is almost entirely external

Next Steps

- Update the time series through 2012 and examining how California's water footprint is expected to change over the next 30 years
- Examine how **climate change** is likely to affect California's water footprint
- Link California's water footprint to **water scarcity** and other related risk factors
- Explore how regional population and economic growth affects how water footprints are distributed





654 13th Street, Preservation Park, Oakland, CA 94612

Phone: (510) 251-1600 Email: info@pacinst.org Web: www.pacinst.org

