

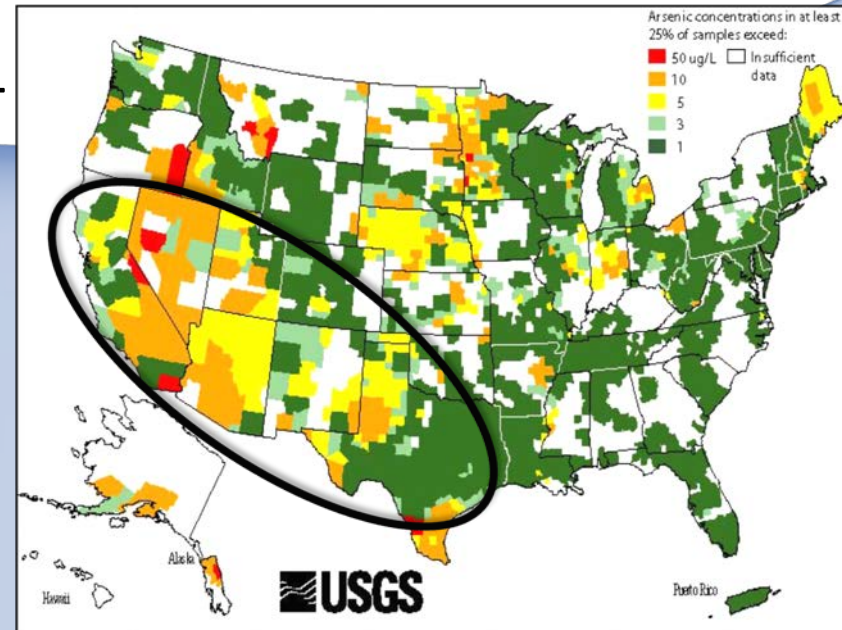
**“Arsenic: Are we Done yet?”
and
“Chromium-6: Sixteen and Counting”**

WESTCAS 2017 Annual Conference
WESTCAS “Then and Now”
June 21, 2017



Arsenic Rule – Then & Now

- June 2000 – EPA proposes 5 ppb MCL
- Oct 2001 – EPA adopts 10 ppb MCL
- WESTCAS v. USEPA Settlement – Guidance included enhanced alternative monitoring & exemptions
 - WESTCAS Shout-out:
 - ✓ Michelle DeHann
 - ✓ John Burkstaller
 - ✓ Larry Bazel, esq
- 2015 – new EPA risk assessment was expected; increased risk calculated



The Western Coalition of Arid States
WESTCAS

June 12, 2002

Mr. Ron Bergman
Office of Groundwater and Drinking Water (4606M)
U.S. Environmental Protection Agency

WESTCAS has been involved in the Arsenic Rule as a stakeholder and a litigant, representing the water resources and water quality views of approximately one hundred water and wastewater utilities in Arizona, California, Colorado, Nevada, New Mexico, Oregon and Texas. WESTCAS compliments EPA's foresight to develop a guidance document to assist States and water systems



Regulating Chromium-6 in Drinking Water



RIP 1968

"Only in California"

SB 351 (2001)

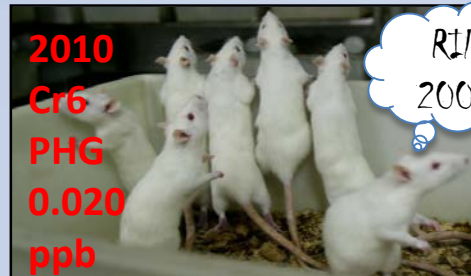
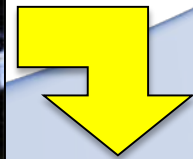
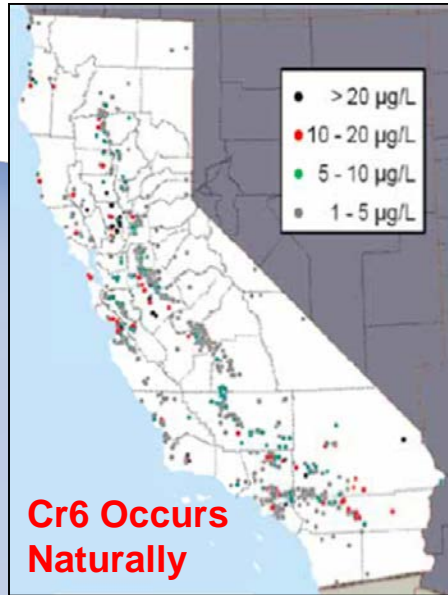
1999
Cr PHG
2.5
ppb



She brought a
small town to the feet
and a huge company
to its knees.

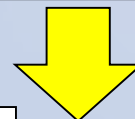
Julia
Roberts
is
Erin
Brockovich

Based on a true story.

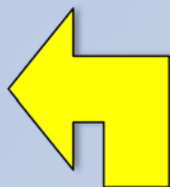


2010
Cr6
PHG
0.020
ppb

RIP
2008



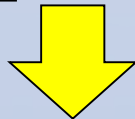
States
Response?



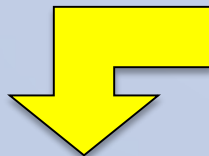
SB 385 (2015)



v.

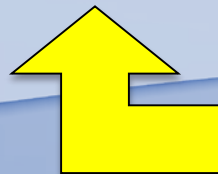


June 1, 2017 Court
Orders State to withdraw
Cr6 MCL, perform
economic feasibility
analysis & set new MCL

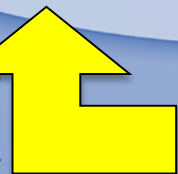


CMTA &
Solano Co.
Taxpayers

v.



April 15, 2014 Court
Orders State to adopt
Cr6 MCL at 0.010 mg/L
(10 ppb)



STATE'S CHROMIUM REMOVAL BEST AVAILABLE TECHNOLOGIES (2013)

Weak-Base Anion Exchange (WBA)



Strong-Base Anion Exchange with Residuals Treatment (SBA)



Reduction Coagulation Filtration (RCF or RCMF)

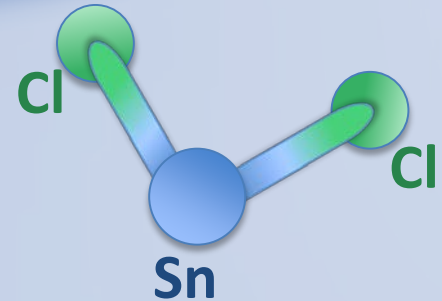


Reverse Osmosis (RO)

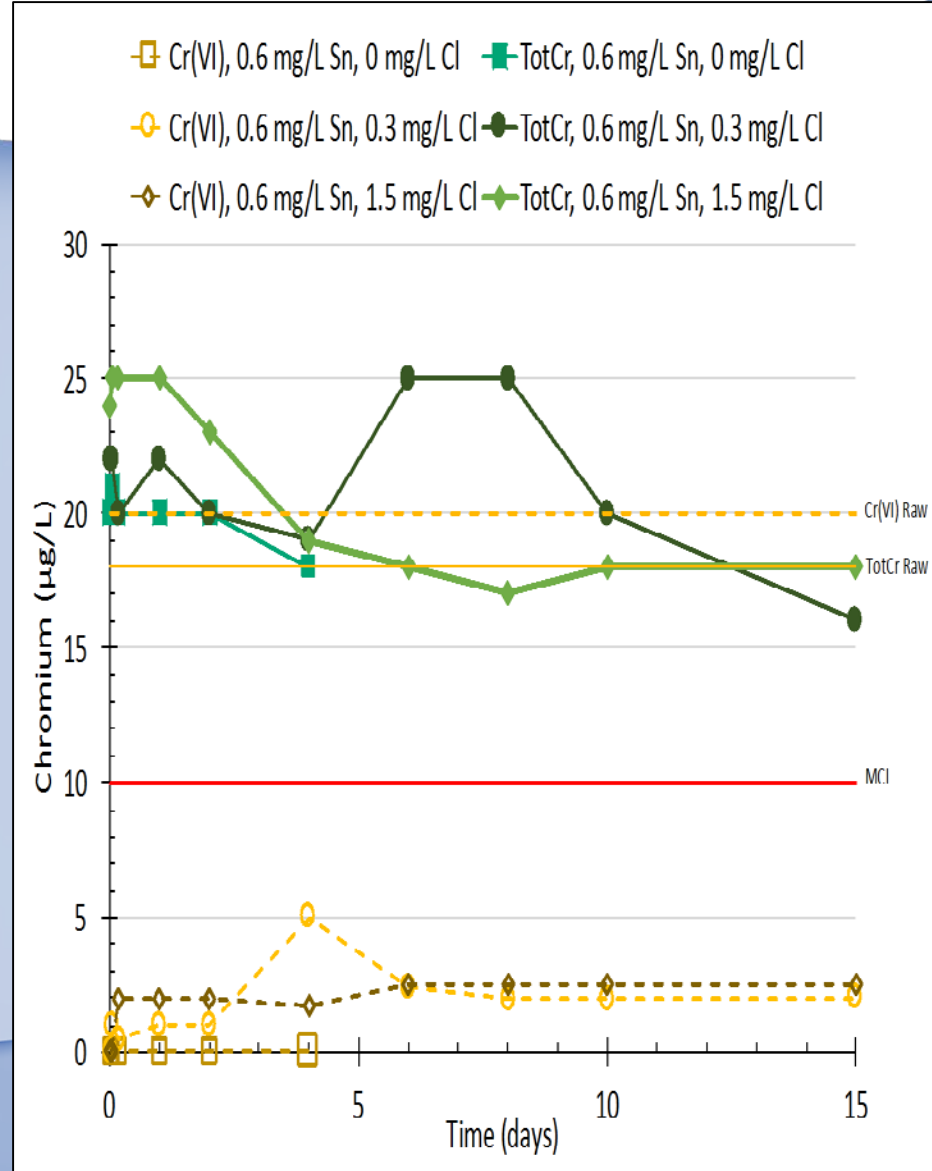
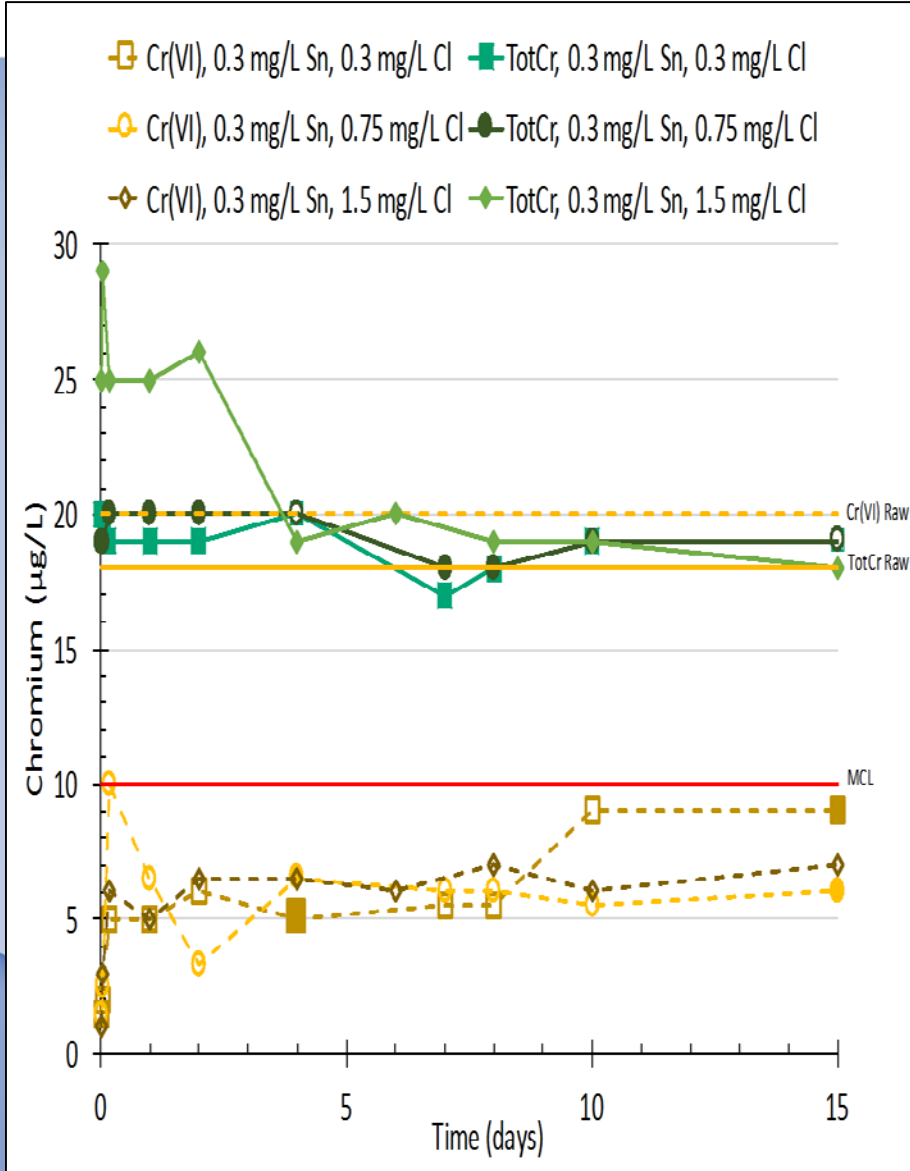


Stannous Chloride (SnCl₂) Alternative

- Salt made of tin and chloride (SnCl₂)
- Approved drinking water additive
 - Solution used to protect pipes
- Stannous reduces Cr₆ to Cr₃
 - Faster and better than other reductants (e.g., iron, vitamin C)
- Studies show Sn is safe
 - Used in food & plumbing products
 - Used in tooth paste (stannous fluoride)
 - No toxicity concerns
 - Not on candidate list for regulation



Simulated Water System Test Results



SnCl₂ Alternative Benefits

- Simpler to construct and operate; more reliable
- Minimizes impacts to the community
- Generates no waste products
- Provides additional pipe protection
- Achieves significant cost savings



EPA's Cr6 Risk Assessment

- Still at Step 1 of 7 (draft development)
- Draft assessment released Sept 2010
- 2011 Peer Review – need to consider new health effects information
- Oct 2014 – last public meeting to discuss health effects studies
- Date for next draft keeps sliding – 2017?



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