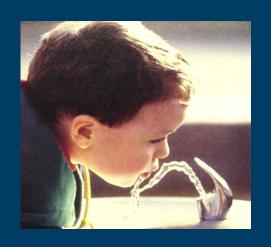
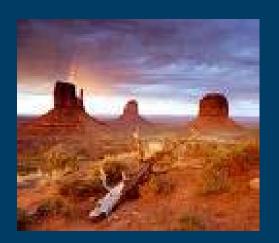
US ERA ARCHIVE DOCUMENT



### Ensuring Sustainable Drinking Water Systems







Corine Li, P.E. Manager Drinking Water Office EPA, Region 9

Environmental Justice/Disproportionate Environmental Health Impacts Symposium Washington, D.C. March 17-19, 2010



### **EPA's National Priorities for the Future**

- Taking Action on Climate Change
- Improving Air Quality
- Assuring the Safety of Chemicals
- Cleaning Up our Communities



- Protecting America's Waters
- Expanding the Conversation on Environmentalism and Working for Environmental Justice
- Building Strong Partnerships



### **Road to Safe Drinking Water**



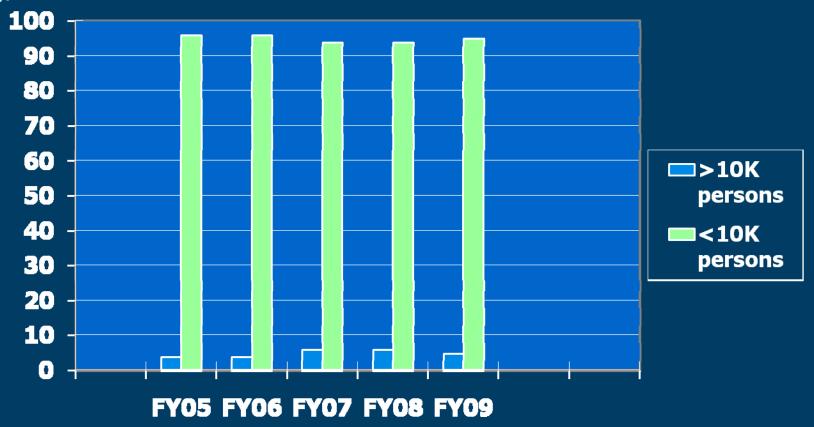


# **Challenges to Providing Safe Drinking Water**

- Aging Infrastructure
- Protection of water sources to include climate change adaptation
- Demands for lower utility costs & trust of water quality
- Operator retention/recruitment
- New enhanced and protective regulatory requirements and rules
- Dis-economies of scale (ie, small systems)



#### EPA Region 9 Pacific Southwest: Percent of Public Water Systems with Health-based Violations



Total # of PWS w/HB violations: 2,157

Total # of PWS: 10,146

### CWSs with Violations by Size

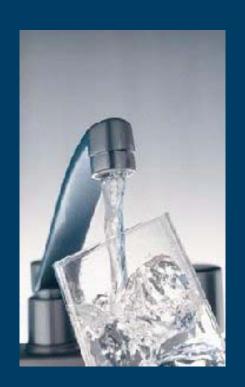
CWS only	Total Systems	Systems with Health Based Violations	Percent of Systems with Health Based Violations	Systems with Non- Health Based Violations	Percent of Systems with Non-Health Based Violations	Systems with any Violations	Percent of Systems with any Violations
<=100	12,985	1,491	11.5%	5,196	40.0%	5,775	44.5%
101-500	16,000	1,778	11.1%	5,681	35.5%	6,498	40.6%
501-3,300	13,868	1,471	10.6%	4,351	31.4%	5,142	37.1%
3,301- 10,000	4,857	527	10.9%	1,254	25.8%	1,570	32.3%
10,001-	4,637	321	10.976	1,234	23.676	1,370	32.376
100,000	3,758	382	10.2%	856	22.8%	1,091	29.0%
> 100,000	408	19	4.7%	65	15.9%	77	18.9%



# EPA's National Strategic Plan (2009-2014)

#### **GOAL 2: Clean and Safe Water**

By 2014, 88% percent of the population in Indian Country served by community water systems will receive drinking water that meets all applicable health-based drinking water standards. (Strategic Target 3)





## Water Safe to Drink Measure Performance

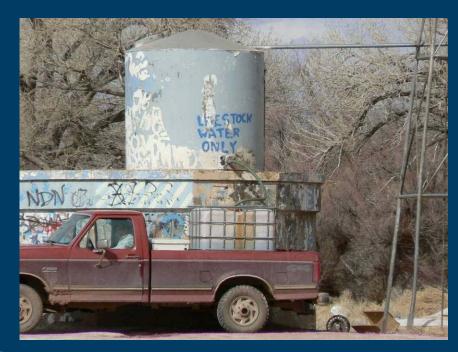
### Goal 2: % of population served by tribal CWSs meeting all health-based standards





#### Non-Public Water Systems: Lack of Access in Indian Country

- 30% of Navajo families (54K) haul drinking water from livestock wells, springs, and other unregulated sources compared to <1% nationwide.
- Of 235 unregulated sources tested, >10% are contaminated with uranium and radionuclides. Majority also positive for coliforms.





#### **Lack of Access in Indian Country**

- Continue outreach and education
- Oversee waterline construction projects
- Implement pilot water hauling program
- Provide alternative regulated water sources

#### Díí baa' ádahołchijh!

Water from these wells\* in Baca-Prewitt-Haystack is NOT safe to drink





Advisory issued jointly by DiNEH Project and NNEPA-PWSSP

Dec. 2007, Rev. Feb., Mar. 2008 Call 505-262-1862 or 928-871-7755 or visit www.navajopublicwater.org



\*Navajo Nation policy is that these wells are for livestock use only and are not to be used for human drinking water.



# Factors that Challenge Water Systems

	All Public Water	Small	Not a
	Systems	PWS	PWS
		<10,000	
Aging infrastructure	X	X	X
Operator retention	X	X	X
Climate change adaptation	X	X	X
Increased number of regulations	X	X	X
Lack of technical, managerial		X	X
and financial capacity			
Jurisdictional barriers			X
Personal preferences			X



#### **Guiding Principles**

- Access not based on ability to pay
- Provide a hand-up not a hand-out



- Employ a variety of strategies to address full spectrum of needs
- Better targeting of assistance
- Ensure long-term sustainability of small systems



### Strategic Approach to Ensuring Water System Sustainability

- Technical: Training and technical assistance.
- Managerial: System asset management
- ❖ Financial: Revenue > operational costs
- Community outreach and awareness
- What else should we be doing?



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