

NSF International

The Public Health and Safety Company™

Consumer Water Issues

February 9th, 2006

NSF

Live safer™

NSF Is The Global Leader In Public Health And Safety.

- Founded in 1944
- Serving over 4,000 companies and 8,000 plants across 80 different countries
- Conducting over 27,000 audits a year



Our Mission Has Always Focused On Protection Of Public Health And Safety.

NSF International, an independent, not-for-profit non-governmental organization, is dedicated to being the leading global provider of public health and safety-based risk management solutions while serving the interests of all stakeholders.

We make the world safer by improving public health.

NSF and the World Health Organization

Collaborating Center for:

- Drinking Water Safety and Treatment
 - Drinking Water Quality
 - Recreational Water Safety
- Food Safety
- Indoor Environments
 - Indoor Air



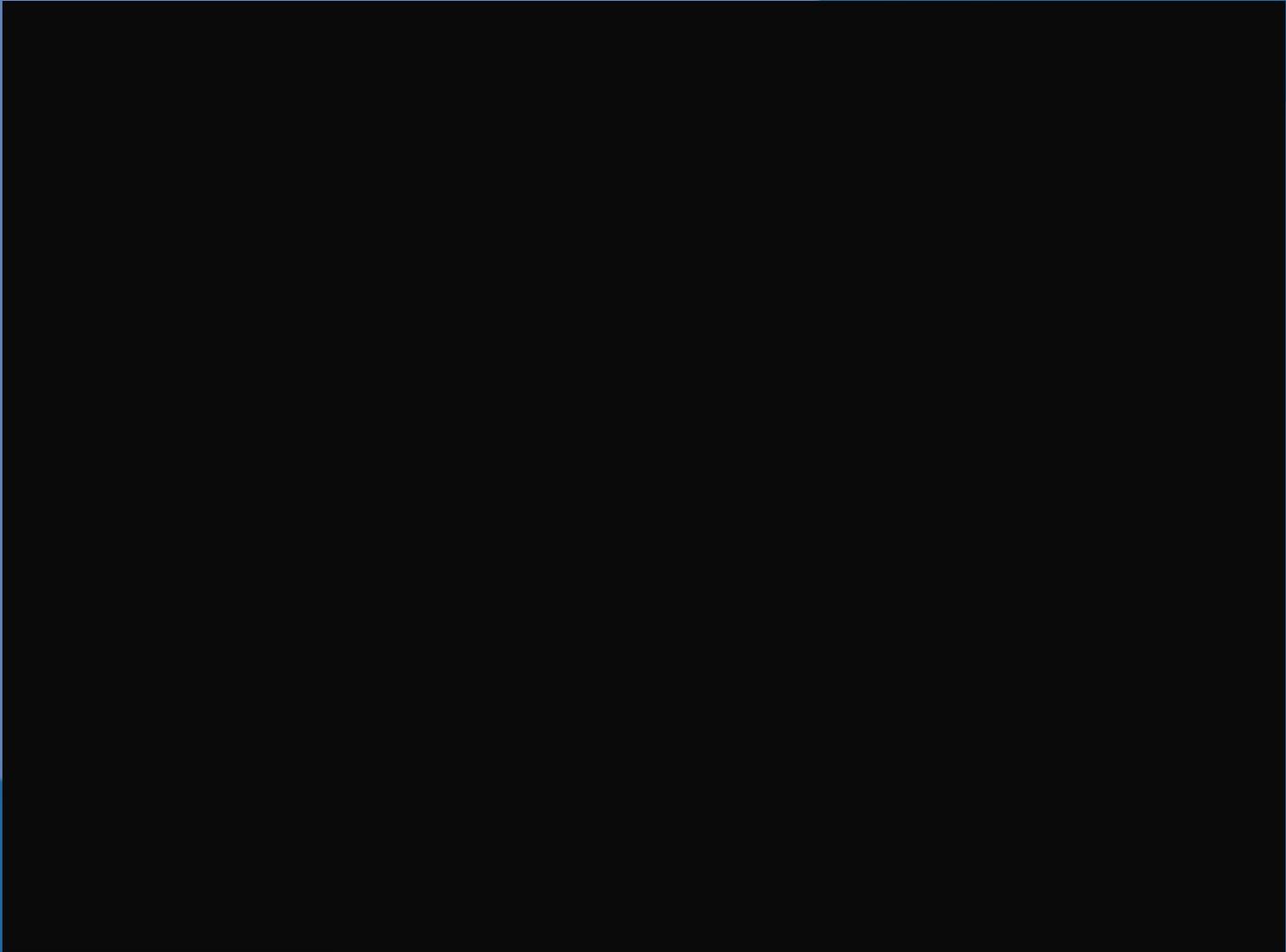
Program Support From The Environmental Protection Agency

- Three projects supported by EPA:
 - Small Drinking Water Systems
 - Source Water Protection
 - Wet Weather Flows
- Two centers established in 2001:
 - Drinking Water Systems Center
 - Water Quality Protection Center



NSF Water Programs

- Bottled Water Certification
- Plastics Piping
- Plumbing Products
- Drinking Water Treatment Chemicals
- Drinking Water System Components
- Pool and Spa
- Wastewater Treatment Units
- Drinking Water Treatment Units



Program History: Drinking Water Treatment Units

- 1968** U.S. Health Officials and Industry Representatives requested NSF develop Standards.
- Demonstrate product performance.
 - Standardize testing and claims.
- 1973** NSF Standard **42** Adopted; Aesthetic Claims.
- 1980** NSF Standard **53** Adopted; Health Claims.
- 1981** NSF Standard **58** Adopted; Reverse Osmosis.
- 1987** NSF Standard **44** Adopted; Softeners.
- 1989** NSF Standard **62** Adopted; Distillation.
- 1991** NSF/ANSI Standard **55** Adopted; Ultraviolet.
- 2004** NSF/ANSI Standard **177** Adopted; Shower Filters.

NSF Receives Significant Media Exposure.

- More than 586 unique annual mentions in articles & news stories reached over approx. 50 million consumers
- In addition, the Scrub Club has generated more than 72 million media impressions
- Major media outlets include:
 - NBC, Today Show
 - Good Morning America
 - New York Times
 - Washington Post
 - Consumer Reports
 - Family Circle
 - Prevention
 - USA Today
 - Wall Street Journal



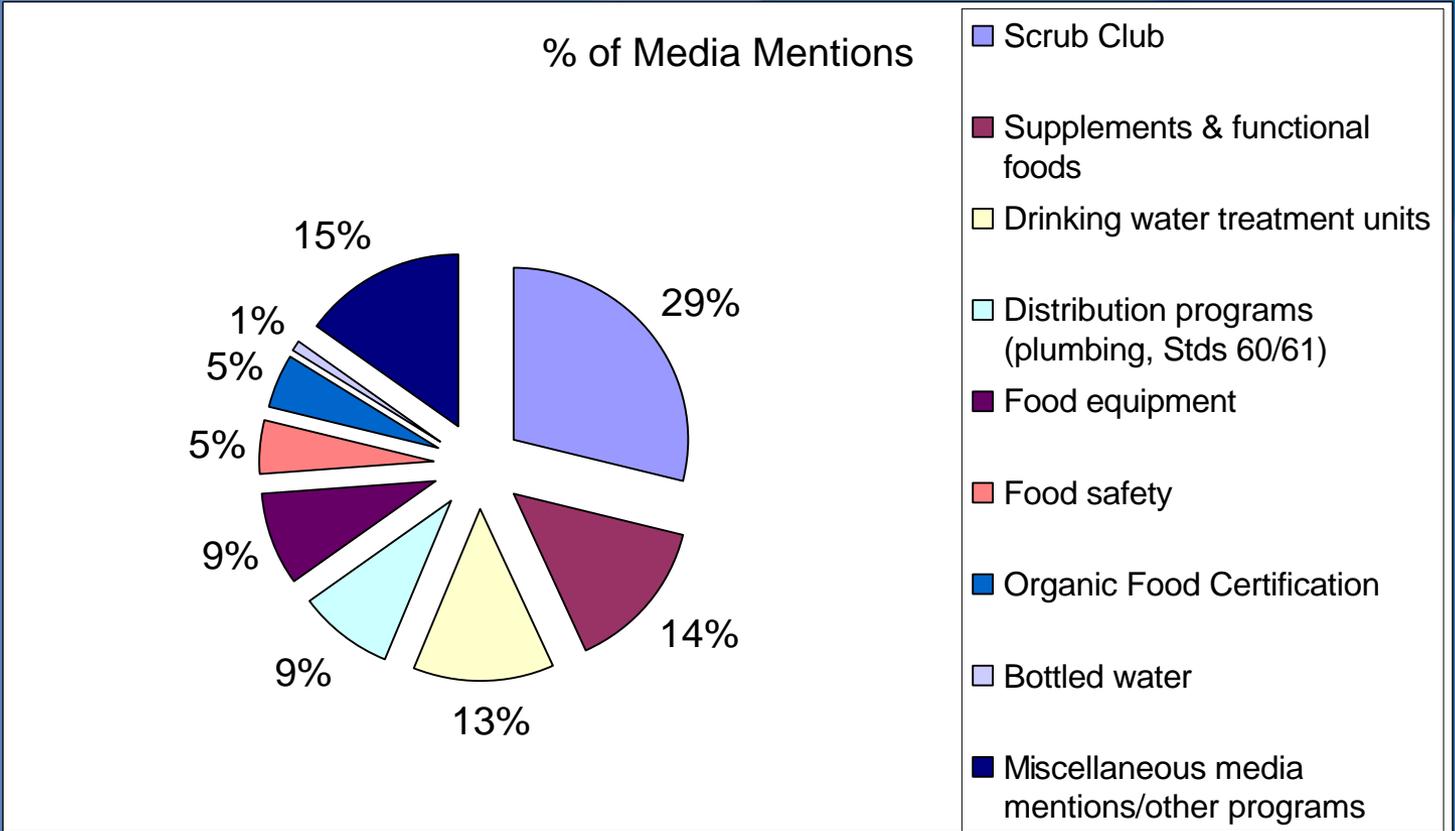
FamilyCircle

NSF

Consumer Publications

- **Consumer Reports:** “To be assured a water filter will remove a contaminant, its label should specify that the filter is NSF Certified.”
- **Wall Street Journal:** “To make sure the filter does what it claims, look for the seal of NSF International, an independent, not-for-profit group that certifies water-filtration devices.”
- **Real Simple:** “Look for the NSF stamp to see if a system is effective against a specific contaminant.”
- **Martha Stewart Living:** “But industry standards developed by NSF International, a non-profit that tests and certifies filters, can help.”

NSF Receives Significant Media Exposure.



NSF
Scrub ClubTM

WE ARE THE SCRUB CLUB

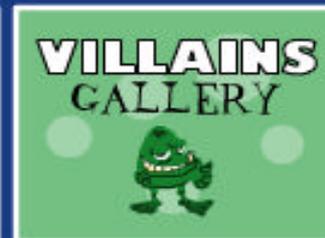
See the
first exciting
episode!



**SCRUB CLUB vs.
BAC**



PLAY ▶



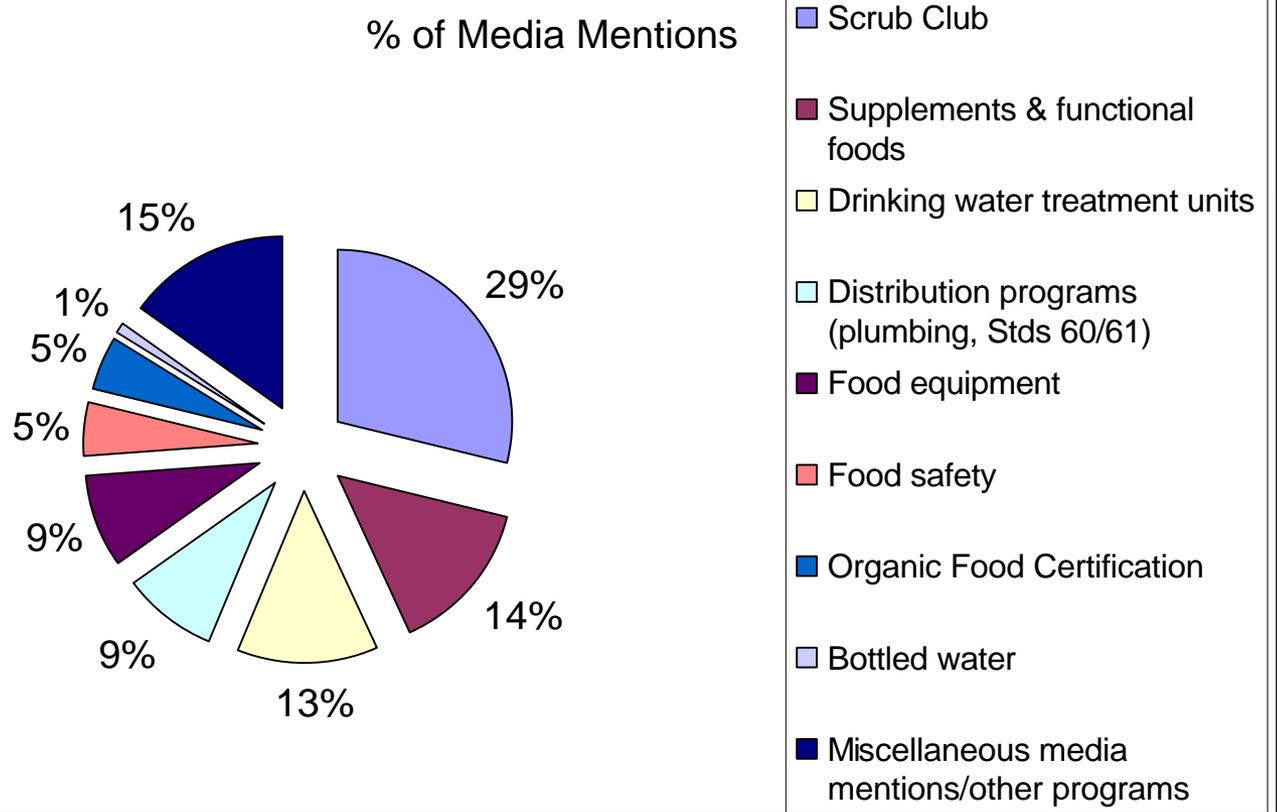
▶ [CLICK TO PLAY THE SCRUB CLUB THEME SONG!](#)

▶ [CLICK TO PLAY THE HANDWASHING SONG!](#)

NSF Receives Significant Media Exposure.



% of Media Mentions



For 60 Years, NSF Has Been A Resource For Consumers, Industry, And Regulators.

- NSF Consumer Affairs Office
 - Over 6 million visitors annually at www.nsf.org
 - Over 15,000 inquiries annually via phone and email
 - Providing literature on a range of hot consumer issues including:
 - Dietary supplements
 - Bottled water and drinking water filters
 - Plumbing products and faucets
 - Food safety
 - Residential appliances
- Publications and newsletters
 - *The Standard of Excellence, NSF reMarks, N3/Nutritional Notes, NSF FreshCheck CounterCurrents, FoodSafety Insights* and numerous technical papers
 - Total circulation of over 200,000

Consumer Affairs Office 2005 Results

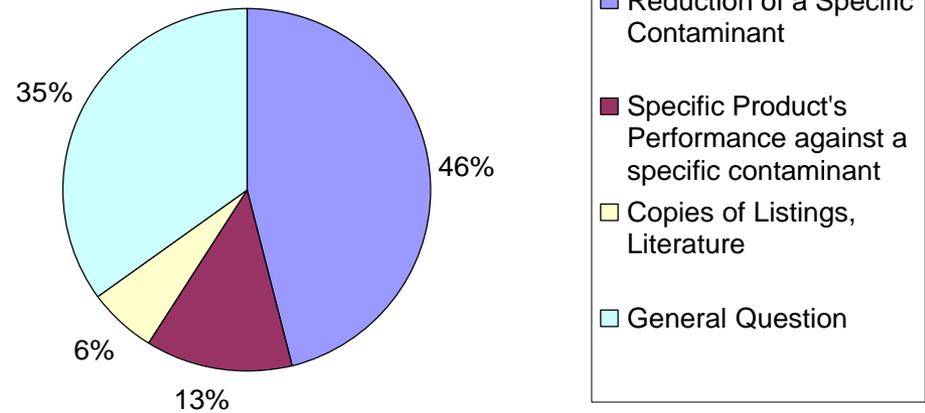
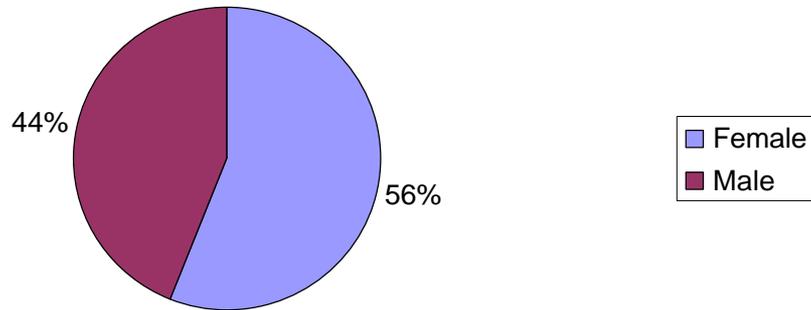


- 10,540 Inquiries to NSF's Consumer Hotline (email, phone)
 - 4,634 hotline calls; 5,906 written (emails, letters)
 - 74% of phone calls were water-related
 - 35% of written inquiries about water
 - More than 50% of all water inquiries were referred to NSF by a gov't agency
 - Over 1,700 mailings to consumers and 20,000 fact kit downloads.
- Referrals:
 - 51% government (26% EPA).
 - 15% Web site.
 - 12% Media.
 - 22% Industry

Consumer Affairs Office Callers

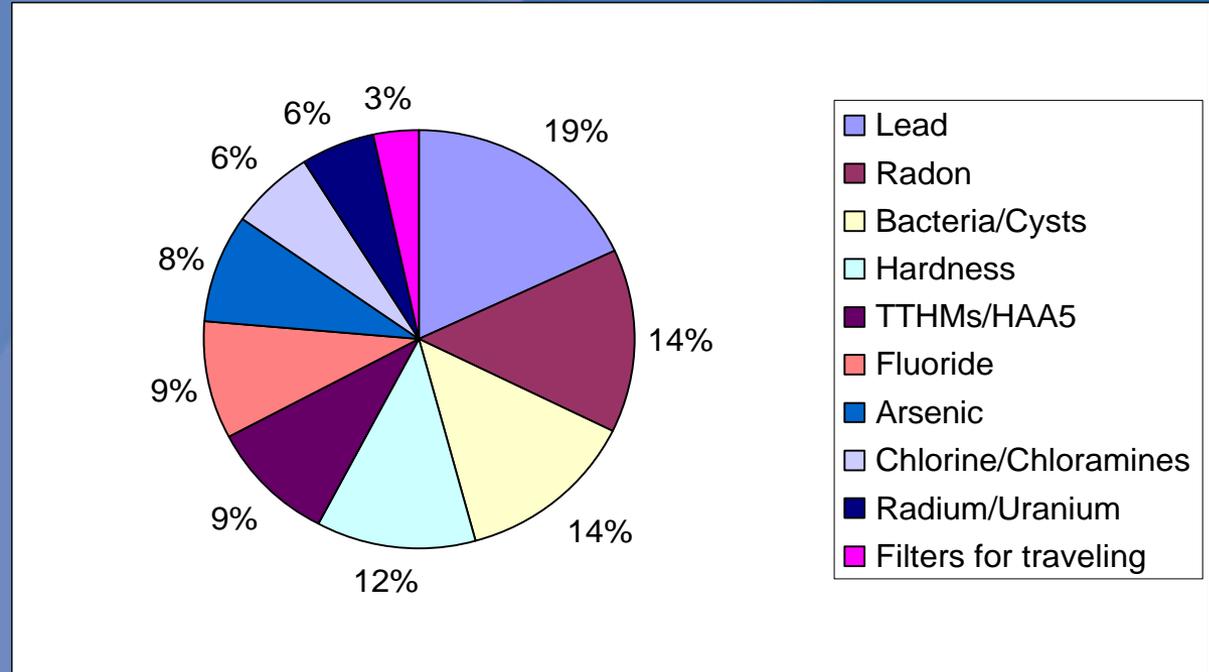


NSF Consumer Callers



Primary Water Concerns

1. *Lead*
2. *Radon*
3. *Bacteria/cysts*
4. *Hard water
softener
performance*
5. *TTHM/HAA5*
6. *Fluoride*
7. *Arsenic*
8. *Chlorine/chloramines*
9. *Radium/Uranium*
10. *Filters for traveling
(backpacking/foreign travel)*



Other General Questions

The general concerns of the remaining consumers (35%):

- *“What filter do you rate the highest?”*
- *“What treatment system do you recommend for tap (or well) water?”*
- *“I am buying bottled water but it is expensive. How can I treat my tap water in-home to bring it up to “bottled water quality.””*
- *“I just received a water quality report from my utility. What does (report term) mean? What is (name of compound/contaminant)?”*
- *“I’ve been reading about pharmaceuticals in water and wastewater. Can you tell me more about this problem?”*

POU Homeland Security Verifications

- Purpose: to determine the possible level of protection provided to the user during a contamination event
- Tested commercially available products that represent typical POU RO systems
 - Watts Premier Ultra 5
 - Sears Kenmore Ultrafilter 500
 - Pall/Kinetico Purfecta (*marketed as a microbiological water purifier*)



Homeland Security Verifications Threat Agents Protocol

Challenge Chemicals

Organic Chemicals

Aldicarb

Benzene

Carbofuran

Chloroform

Dicrotophos

Dichlorvos

Fenamiphos

Mevinphos

Oxamyl

Strychnine

Metals

Cadmium

Cesium

Mercury

Strontium

Biological Agents

Bacteria

B. diminuta and *H. pseudoflava*

Viruses

coliphage fr, MS2, and PhiX174

Conclusions

- POU systems with an RO membrane and a high-quality post-membrane carbon filter can offer significant protection against both biological and chemical agents
- No membrane or seal degradation due to chemical exposure was detected



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