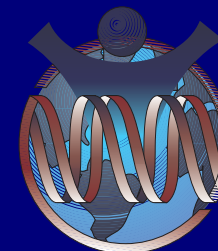




Increased public understanding of environmental disease: Translating research findings into public policy

Robin Fuchs-Young, PhD
Director, Community Outreach and Education
Program (COEP)

**NIEHS Center for Research on
Environmental Disease (CRED)**



Toxic chemicals taint Barton waters

POOL, OTHER CITY CREEKS MAY POSE HEALTH RISK



Decades-old fuel waste cited as possible source

By Kevin Carmody
and Mike Ward

AMERICAN-STATESMAN STAFF

Levels of toxic chemicals in Barton Springs Pool and just upstream on a hillside overlooking the pool have exceeded those found in a dozen of the worst hazardous waste sites in the country, an Austin American-Statesman investigation has found.

At points along three other Austin bodies of water —

The city's view

City Manager Toby
Futrell's statement.

Insight, E3



AMERICAN-STATESMAN

Barton Springs Pool - 2003 Timeline

January 19 *Austin American-Statesman* coverage suggests that buried coal gas waste is a likely source of PAHs in pool and tributary.

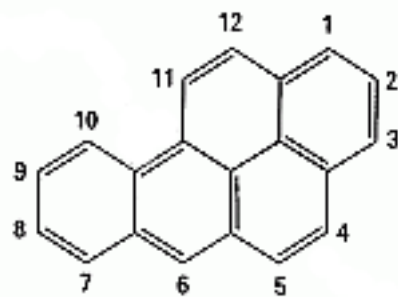
RESULT: City Manager closes pool for 90 days pending an investigation to address citizen concerns created by coverage.

February 5 CRED scientists, Drs. DiGiovanni and Walker, meet with regulatory and City officials at the pool.



Timeline (cont.)

Feb 5, 2003 Dr. Walker addresses Austin City Council Working Session about the toxicology and health effects of PAHs



Benzo(a)pyrene



March 27th, 2003

CRED COEP in collaboration with City of Austin and TAMU convene a community forum.

- Palmer Events Center
- Approx. 200 attended

Panel of national, state and local experts addressed the nature of PAHs and other contaminants found to date.

- UTMDACC - CRED
- Texas A&M University
- City of Austin Watersheds Office
- Texas Department of Health
- Environmental Protection Agency
- Texas Commission on Environmental Quality



**Community Outreach and Education Program
Center for Research on Environmental Disease (CRED)**
A joint NIEHS funded Center between The University of Texas M. D. Anderson Cancer Center Science Park - Research Division and The University of Texas at Austin



Presents
**A Community Forum
Is Barton Springs Pool
Safe?**

Panel Presentations

- Polycyclic Aromatic Hydrocarbons (PAH) contaminant sources
- Health effects
- Federal & state regulations
- Monitoring of water sediment and soil

Open Q & A Session

Scientific & Regulatory Expert Panelists

- **John DiGiovanni, Ph.D.**
– UT M. D. Anderson Cancer Center
Science Park - Research Division
- **K. C. Donnelly, Ph.D.**
– Superfund Basic Research Program
Texas A & M University
- **Nancy McClintock, M.S.**
– City of Austin
- **Michael Honeycutt, Ph.D.**
– Texas Commission on Environmental Quality
- **Don Williams, M.S.**
– Environmental Protection Agency
- **John Villanacci, Ph.D., EMT**
– Texas Department of Health

FREE ADMISSION
Thursday, March 27 at 6:30pm
Palmer Events Center - Rooms 1 - 5
900 Barton Springs Rd.

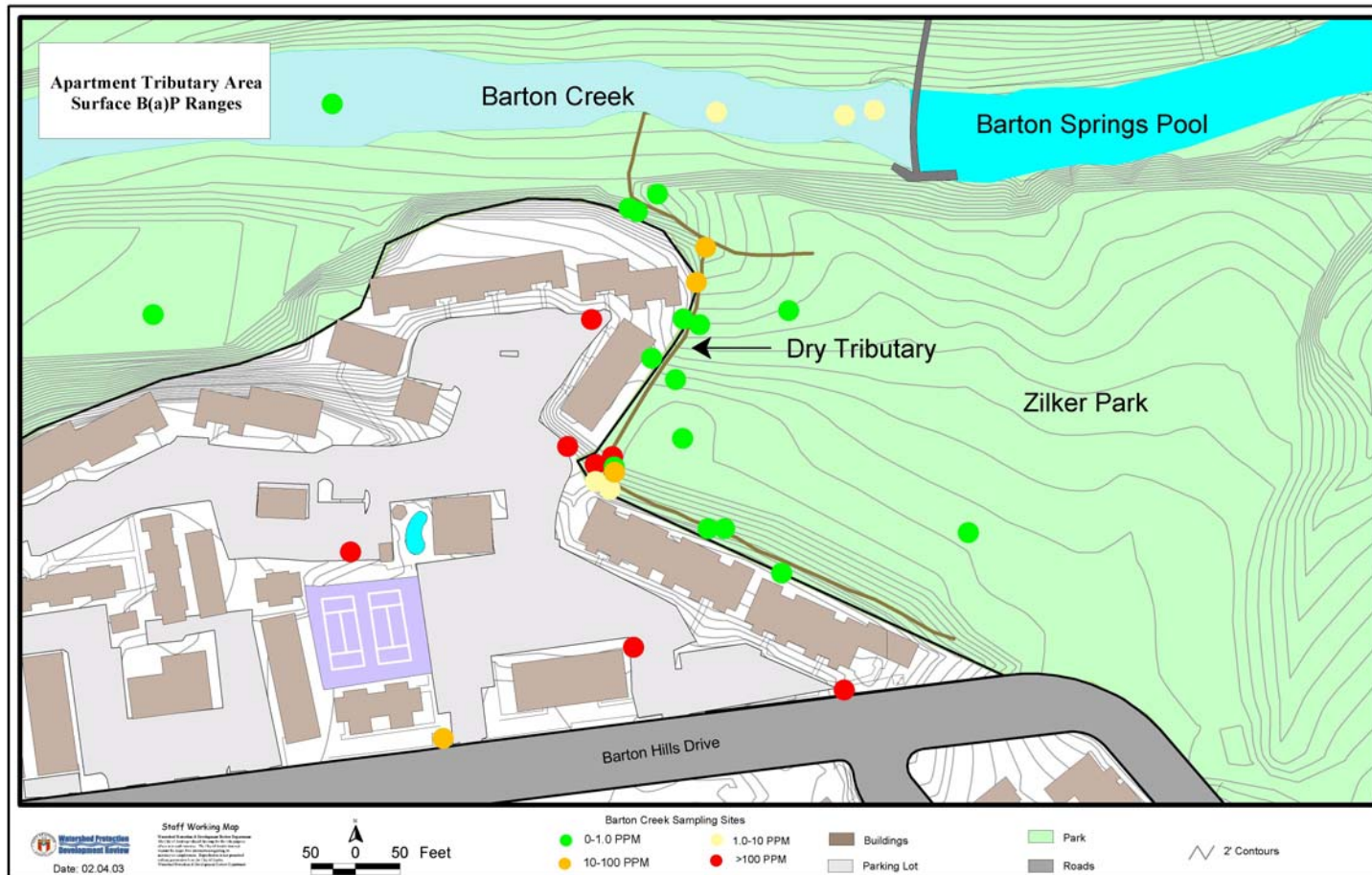
Cosponsored by





Tributary Area

Benzo(a)pyrene in Soils and Sediments

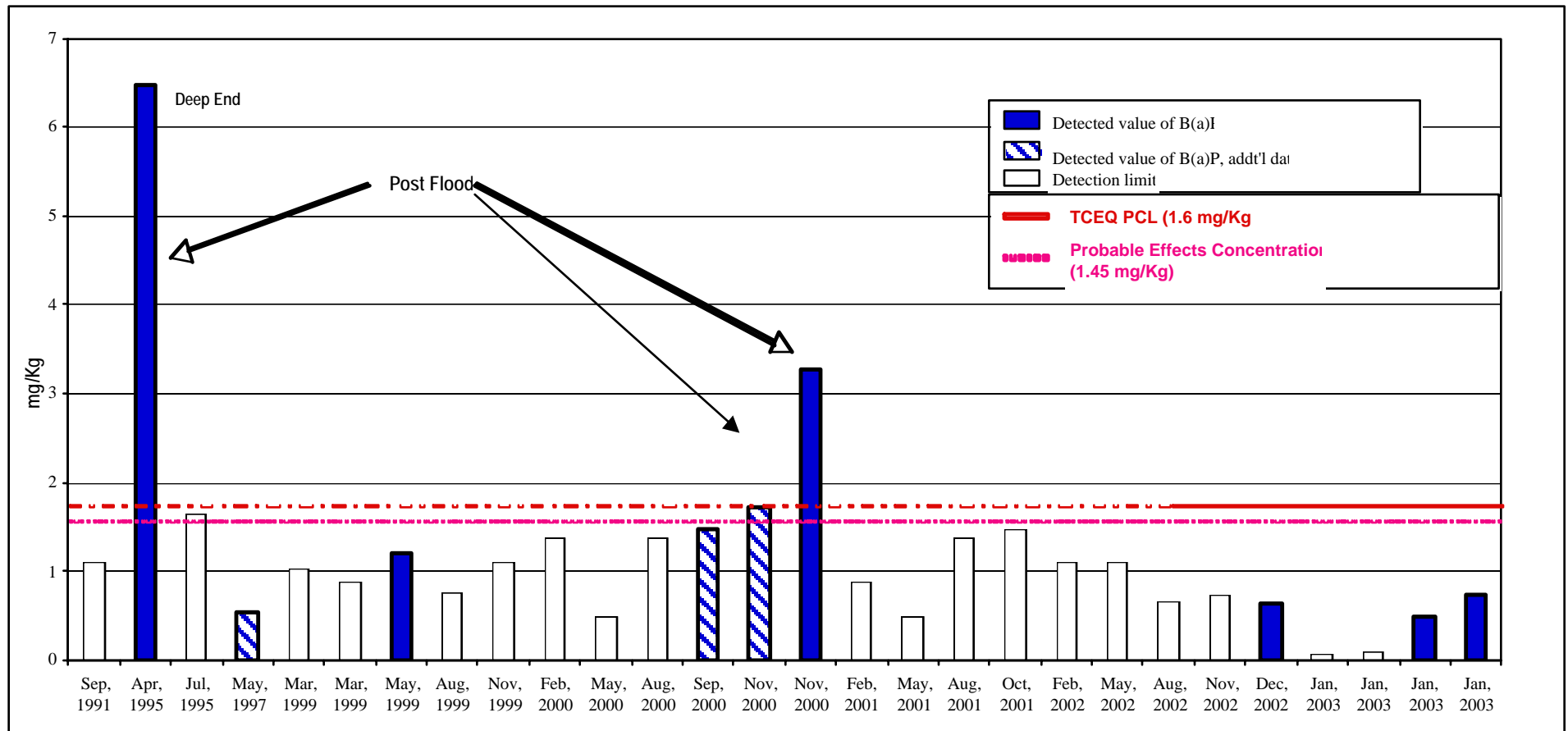


Tributary Area (Actual View)



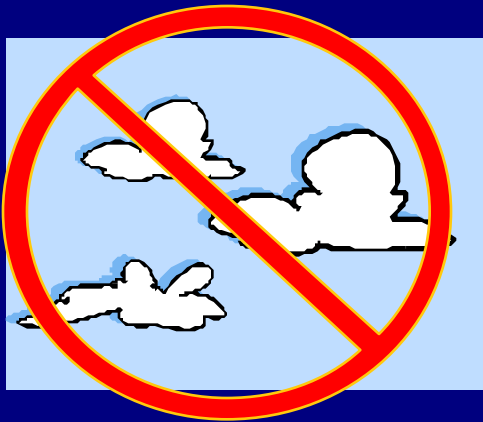
**Bore samples indicated
highest concentration of
PAHs was at the surface**

Barton Springs Pool Benzo(a)pyrene in Sediment



How could the contaminants get into the body?

Air



No contaminants in air
No exposure

Water



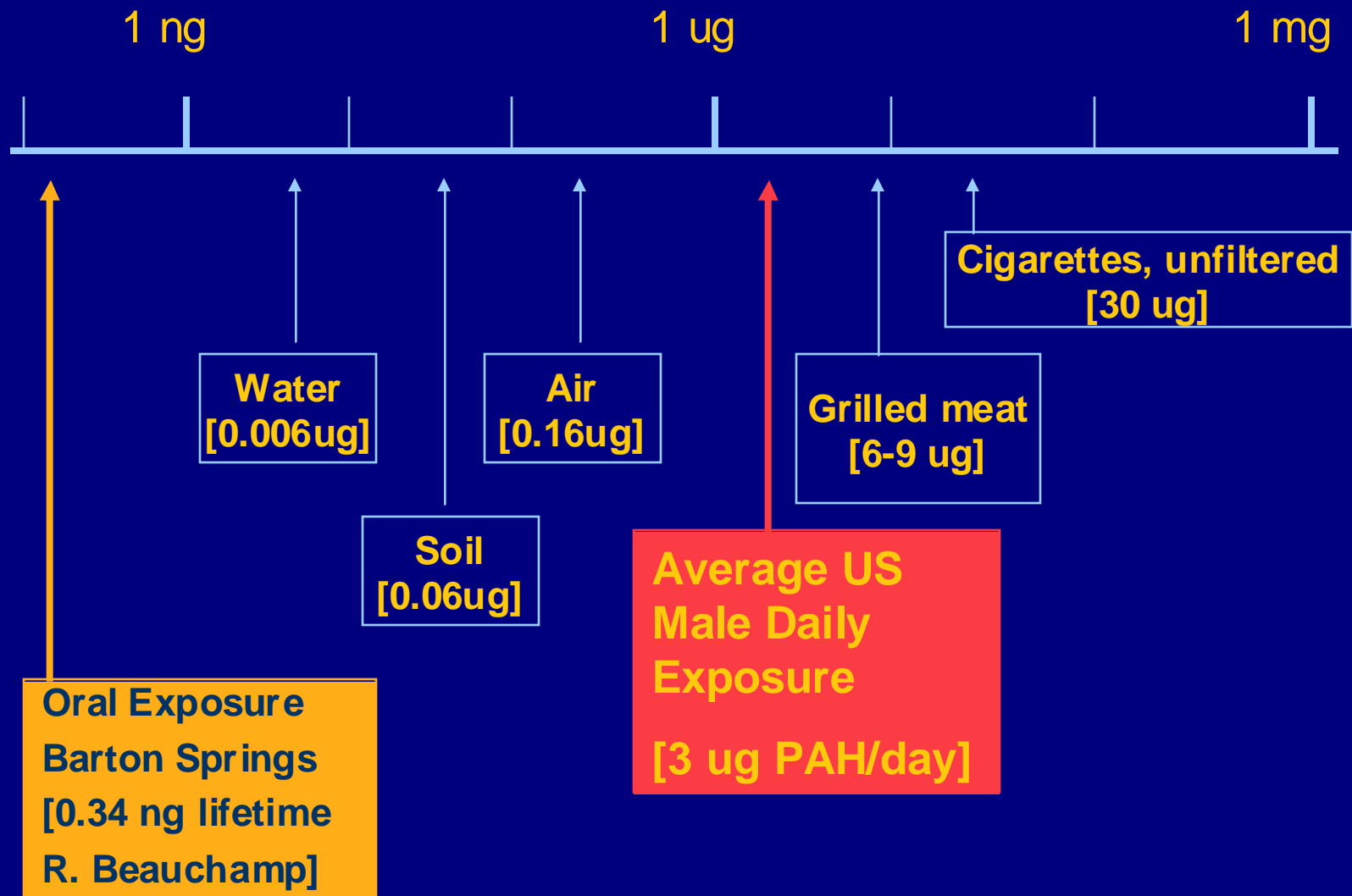
No contaminants in water
No exposure

Soil/Sediment



Contaminants in sediment
Low bioavailability

Daily Intake of PAHs



1. FORUM WAS INFORMATIVE

70% STRONGLY AGREE 30% AGREE 0% INDIFFERENT 0% DISAGREE 0% STRONGLY DISAGREE

2. FORUM TOPIC WAS RELEVANT

77% STRONGLY AGREE 21% AGREE 2% INDIFFERENT 0% DISAGREE 0% STRONGLY DISAGREE

3. INFORMATION PRESENTED WAS CLEAR & UNDERSTANDABLE

59% STRONGLY AGREE 34% AGREE 7% INDIFFERENT 0% DISAGREE 0% STRONGLY DISAGREE

4. ALL CITIZEN CONCERNS ADDRESSED

52% STRONGLY AGREE 41% AGREE 7% INDIFFERENT 0% DISAGREE 0% STRONGLY DISAGREE

5. FORMAT OF FORUM WAS SATISFACTORY & APPROPRIATE

46% STRONGLY AGREE 43% AGREE 4% INDIFFERENT 7% DISAGREE 0% STRONGLY DISAGREE

6. FORUM INCREASED UNDERSTANDING & AWARENESS

50% STRONGLY AGREE 39% AGREE 9% INDIFFERENT 0% DISAGREE 2% STRONGLY DISAGREE

7. SPEAKERS RESPONDED TO QUESTIONS & CONCERNS

48% STRONGLY AGREE 43% AGREE 5% INDIFFERENT 2% DISAGREE 2% STRONGLY DISAGREE

8. HOW DID YOU LEARN ABOUT THE FORUM?

25% CHRONICLE 27% STATESMAN 23% RADIO 5% T.V. 34% FLYER/POSTER 38% E-MAIL

9. WOULD YOU ATTEND ANOTHER COMMUNITY FORUM?

97% YES

3% NO

Follow-up

- Remediation during summer, 2004.
- Cost - \$500K
- Includes soil removal from city land along Barton Creek tributary below apartment parking lot.



Translation and Education for Communities and Policymakers

Subsequent to the Community Forum:

- Confirmed the likely source of PAH contamination was coal tar-based pavement sealant used on upstream parking lot (USGS; Austin Watersheds Protection Office)
- Unknown risks: downstream effects to humans
occupational hazards - laborers handling sealants
environmental degradation
- Meetings with contractors and City officials to discuss alternative (silicone-based) sealants



Precautionary Principle - using the least toxic compounds in the environment whenever possible

Austin City Council Considers Coal Tar Sealant Ban

November 17, 2005 - Dr. Fuchs-Young addresses City Council and advocates the reasonable reduction of carcinogens in the environment.



Ban passes unanimously, 7- 0

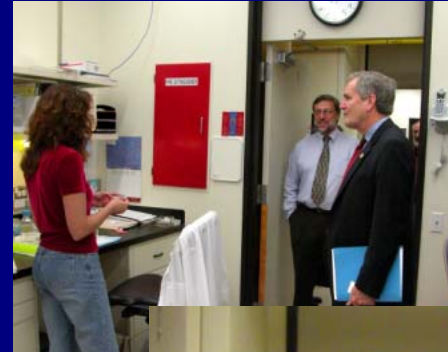
National legislators considering coal tar sealant ban...

Austin American-Statesman
statesman.com

Austin coal-tar ban may get duplicated nationally

Two U.S. Senators tell EPA to study restrictions.

By [Asher Price](#)
AMERICAN-STATESMAN STAFF
Saturday, September 09, 2006



Translation

Interpreting scientific research findings

Education

Increasing public understanding



Acknowledgements

Community Outreach and Education Program of the Center for Research on Environmental Disease

John Di Giovanni, Ph.D. CRED Director

**Jennifer Gorenstein, Judy Bergeron, Ph.D, Don Cook, Erin Herbrich, Joe
Rodriguez, Mary Henderson**

- **Nancy McClintock - City of Austin Watershed Protection Office**
- **Don Williams - EPA, Region 6**
- **KC Donnelly, Ph.D. - Superfund Basic Research Program, Texas A&M**
- **Michael Honeycutt, Ph.D. - Texas Commission on Environmental Quality**
- **John Villanacci, Ph.D. - Texas Department of Health Services**
- **USGS**
- **Toby Futrell - Austin City Manager**