



PUBLIC HEALTH

**ALWAYS WORKING FOR A SAFER AND
HEALTHIER WASHINGTON**

**Washington's Approach to Addressing the
Public's Concerns About EDCs and PPCPs**

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What's behind this issue?



- Increased pharmaceutical use
 - 71% increase in prescriptions from 1993 to 2006
 - 14% population increase
 - 60% increase in OTC drugs since 1990
 - 50% of the medications manufactured used in US
- Aging population
 - Age 65+ = 13% population using 34% prescriptions
 - Average senior has > 40 prescriptions
- General population is becoming increasingly medicated
 - Average person uses 11.8 prescriptions/year
 - 62% of doctor visits result in at least one prescription

How does the problem show up?

Pharmaceutical Study in the Sequim-Dungeness Area

- One time collection of water quality samples from effluent, surface water and ground water.
- 17 PPCP's detected in effluent
- 4 PPCP's detected in surface water
 - Caffeine, nicotine, metformin, estrone
- 3 PPCP's detected in ground water
 - Concentration 2-20 times less than effluent
 - Caffeine, nicotine, metformin
- Low levels (ug/l)

How does the problem show up?

Pollution in People

- 10 Washington State residents tested hair, blood, urine for the presence of toxic chemicals
- Every person had at least 26 and as many as 39 toxic chemicals in their body
 - phthalates
 - perfluorinated chemicals
 - PCB's
 - PBDE's
 - Mercury
- Toxics from consumer products and industrial pollution contaminate all of us and threaten our health.

And so what is the problem?

- Detections of PPCP's do not constitute a health issue.
- We do not know what the impacts are of low concentrations of PPCP's in the environment.
- Challenge is to determine health thresholds.
 - Numerous chemicals
 - Unintended exposure
 - Daily basis



Another aspect of the problem

Deaths to Washington residents in 2004:

- Unintentional drug poisoning 603
- Motor vehicle crashes 623
- Homicides 213
- Suicides 822

Actions Needed

Minimizing or removing PPCPs from the environment:

Safe and proper disposal

- Federal Policy
- Take back program
- HB 1165/SB 5279

Actions Needed

Minimizing or removing PPCPs from the environment:

WWTP Removal Efficiency Study

- Joint project EPA/Ecology/WWTP's
- Sample Influent, Effluent, and Biosolids
- 4 treatment plants
 - Reclaimed water facility with nitrogen removal
 - Phosphorus removal
 - 2 secondary treatment plants

Actions Needed

Better Understanding the health effects of PPCPs in water:

- Promoting a health effects research agenda
- National Academy of Sciences review of the existing literature

Actions Needed

Communicating the known and unknown risks:

- Increase awareness and promoting appropriate behaviors (Attorney General Rob Mckenna)
- Outreach to physicians and veterinarians
- Risk Communications!