

# MassDEP's Work on Emerging Contaminants

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January 24, 2008

# Emerging Contaminants MassDEP Workgroup

- Genesis: Perchlorate in Drinking Water in 2006
- Work Group and its Function
- Definition of Emerging Contaminants
- Process to Screen Contaminants
- Issues the Workgroup is Tracking

# Perchlorate

- 2001 – 2002 On MassDEP's radar screen  
Groundwater at MMR, Plume Migrating  
Public Drinking water supply wells on the Cape
- 2003 Statewide Public Water Supply Tests
- 2004 – 2005 Research, Analysis, Standard  
Development by Perchlorate Workgroup
- 2006 MassDEP Promulgated First Perchlorate  
Drinking Water Standard in U.S. @ 2ppb

# Perchlorate Workgroup Became “Emerging Contaminants” Workgroup

Commissioner and Senior Staff Recognized and Institutionalized This Capacity

- Identify new potential problems early
- Be more prepared
- Establish process and criteria
- Representation from all Bureaus, Offices, Regional Offices

# EC Workgroup: Goals and Function

Centralize focus and expertise on ECs

## Goals:

- Identify new problems early on and track EC Issues
- Establish a process for deciding if actions are needed to protect public health and the environment

## Functions:

- Information exchange and dialogue
- Seek input on EC's for MassDEP consideration
- Establish screening process for recommending EC's for MassDEP to consider
- Recommend EC's for action, including strategies to address them

# MassDEP's Definition of Emerging Contaminants

Hazardous materials or mixtures of interest that are characterized by:

- perceived or real threat to human health, public safety or environment;
- no currently published health standard/guideline exists or it is evolving or being re-evaluated;
- insufficient or limited available toxicological information;
- new source, pathway, or detection limit has been discovered.

May be naturally occurring or manmade chemical, microbial or radiological substance.

# Screening Process and Criteria for Identifying Priorities

- Establish a screening process
- Nominate ECs for the Commissioner's consideration for action
- Develop screening criteria, for example,
  - Consideration of EPA's work on the issue;
  - Toxicity;
  - Certainty in the science;
  - Sensitive subgroups, etc.

# Process for Identifying Emerging Contaminants

- Prepare a master list of EC's
  - Data base scans
  - Knowledge of work group members
  - Input from stakeholders
- Screen by criteria
- Update the list every 6 months:  
January and July

# Contaminant List & Screening

## Preliminary List

Database scans  
Knowledge of workgroup & stakeholders on the presence of the environmental contaminant and exposure pathways  
High urgency and visibility issue

## Screening Process: Step 1

Contaminant is screened out when:

- It is not considered to be generally important;
- Others (EPA, states) are addressing the issue adequately;
- An existing MassDEP standard or guideline exists;
- Jurisdictional issues

## Watch List (What remains)

## Screening Process: Step 2

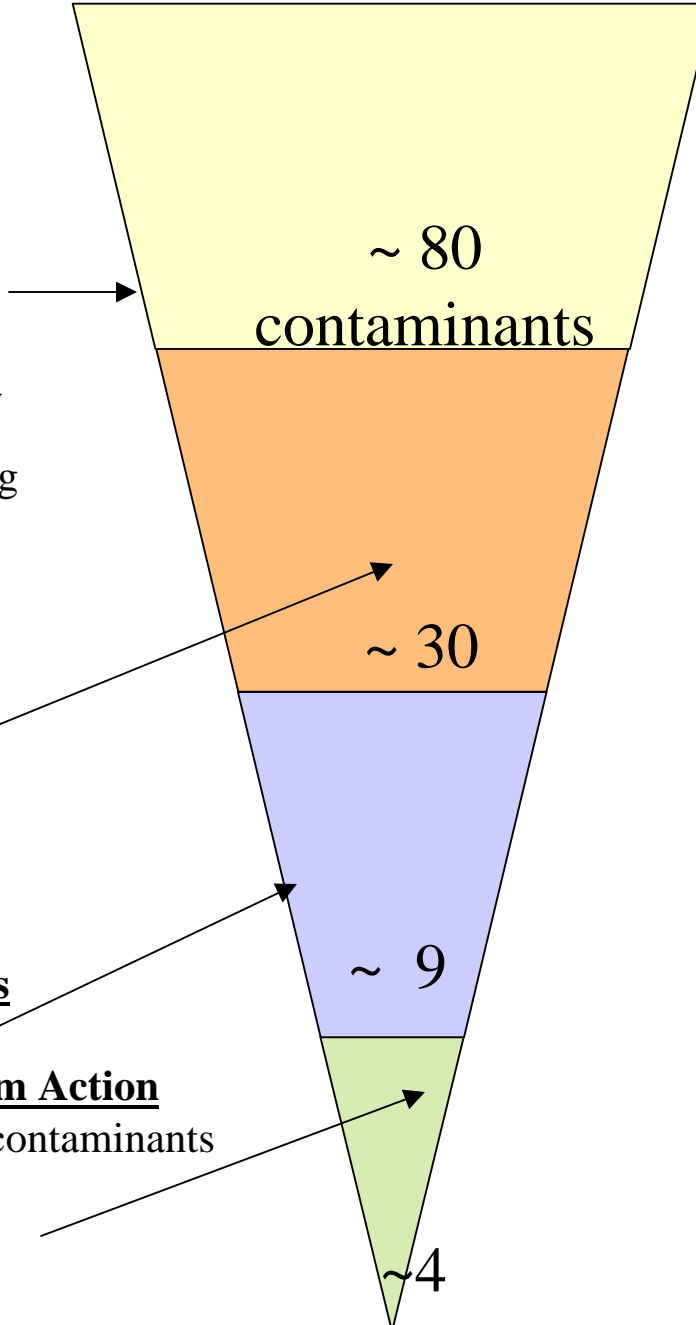
Consider:

- Certainty in science
- Tangible outcomes
- Cross-media contaminant

## Priority Emerging Contaminants

## Nominations for Short-Term Action

Recommend strategies to address contaminants



# Current Priority EC Issues

## Short-Term:

- Pharmaceuticals and Personal Care Products
- Endocrine Disruptors
- RDX (cyclotrimethylenetrinitramine)
- Tetrachloroethylene

## Longer-Term

- Manufactured Nanoparticles
- Brominated flame retardants
- MTBE
- Trichloroethylene
- Tungsten

For Input into identifying EC's  
and/or  
more information on  
MassDEP's Emerging  
Contaminant Work:

[www.mass.gov/dep/toxics/stypes/emercfs.htm](http://www.mass.gov/dep/toxics/stypes/emercfs.htm)

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# MassDEP Established Perchlorate Workgroup

- Evaluated Results from Public Water Supply Testing
- Learned More About Sources
  - Munitions, Blasting, Fireworks, Medical Device Mfg.
- Reviewed Data on Risk
- Determined Protective Standard