

MassDEP's Work on Emerging Contaminants

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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 Up to 500ppb+ Found in Groundwater at MMR, Plume Migrating
- 2002 Low-level hits Found in Public Drinking Water Supply Wells on the Cape
- 2004 Tested 700 Public Water Supplies
 - 1300 ppb was highest level

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
- 2006 MassDEP Promulgated U.S.' First Perchlorate Drinking Water Standard – 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

Function of the EC Workgroup

- 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
- Centralize focus and expertise on ECs

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 Criteria for Identifying Priorities

- Established a screening process
- Nominate ECs for the Commissioner's consideration for action
- Screening criteria include, for example, consideration of EPA's work on the issue, toxicity, certainty in the science, sensitive subgroups, exposure potential

Process for Identifying Emerging Contaminants

- Prepare a master list of ECs
 - Data base scans
 - Knowledge of work group members
 - Input from stakeholders
- Update the list every 6 months
 - January and July

Contaminant List & Screening

Preliminary List

Based on:

- 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

Screening Process: Step 2

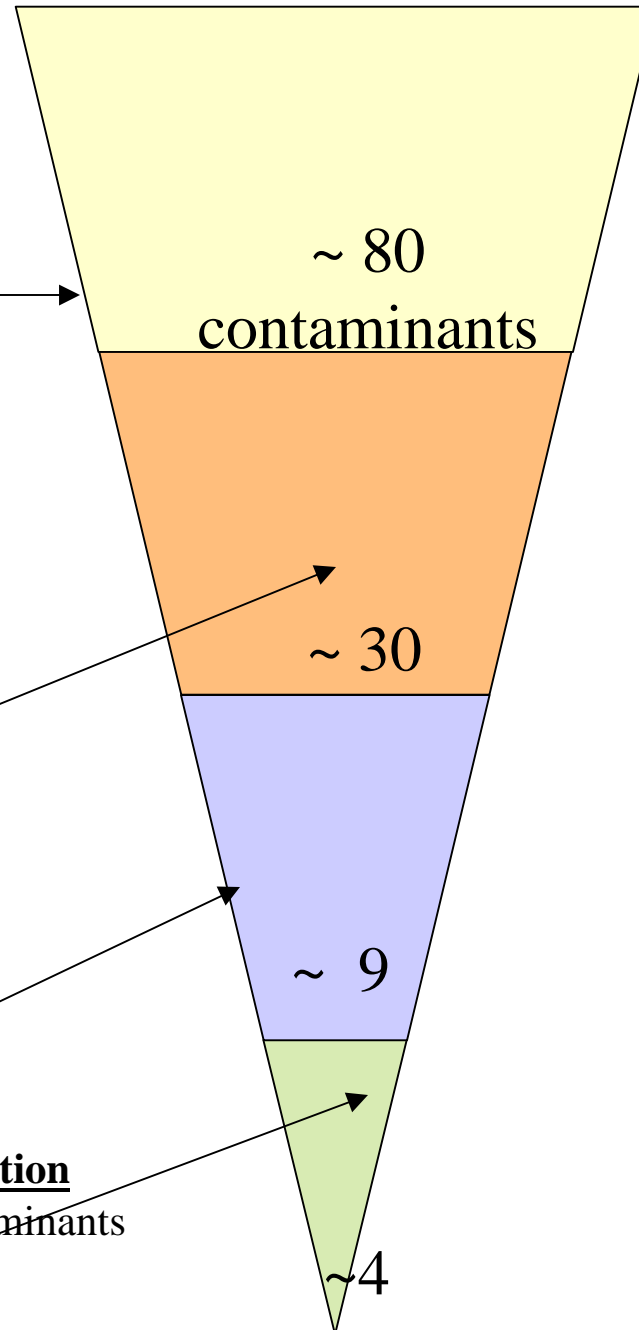
Consider:

- 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 more information on
MassDEP's Emerging
Contaminant Work:

www.mass.gov/dep/toxics/stypes/emercfs.htm

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