

Risk Reduction Approaches to PFCs in Canada

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Environment Canada

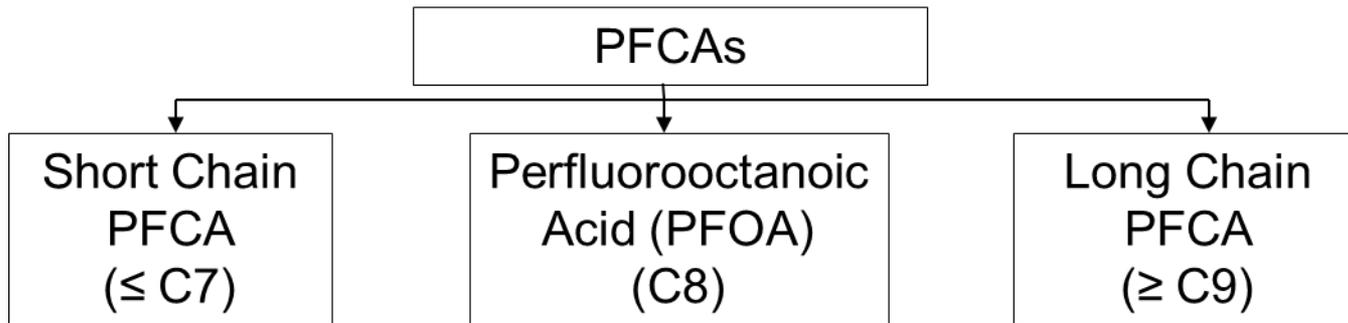
Webinar of the OECD/UNEP Global PFC Group

December 3, 2014

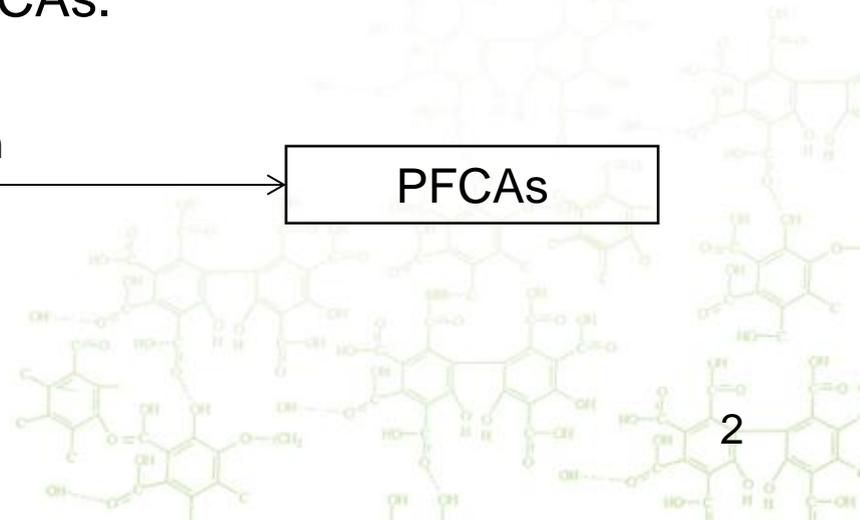
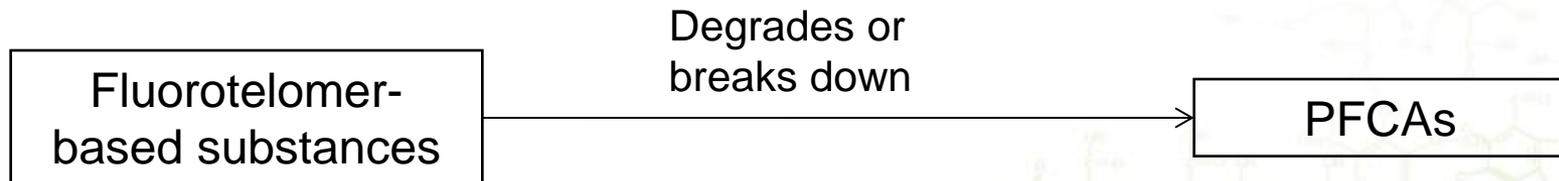


Perfluorinated carboxylic acids (PFCAs)

- PFCAs are chains of carbon where the hydrogen atoms directly attached to the carbon atoms are all replaced with fluorine atoms.

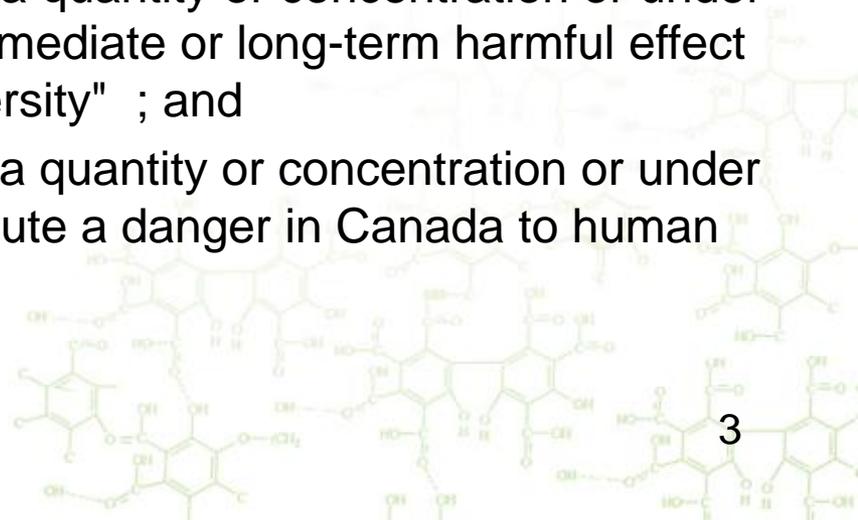


- Precursors to PFOA and LC-PFCAs are chemicals that degrade or breakdown to become PFOA or LC-PFCAs.



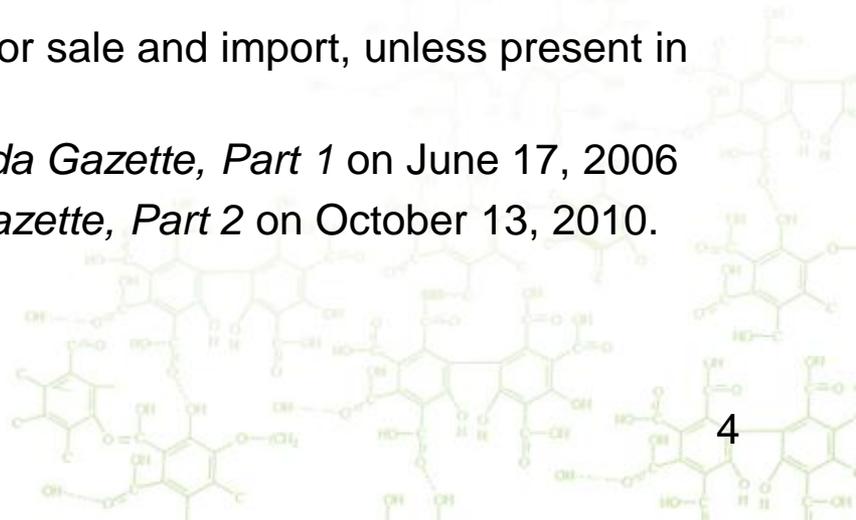
Four New Fluorotelomer-Based Substances

- In 2004, the New Substances Program of Environment Canada and Health Canada assessed four new substances considered sources of PFCAs. These substances are all fluorotelomer based polymers.
- The assessment concluded that these substances were toxic under the *Canadian Environmental Protection Act, 1999* (CEPA, 1999), and met sections:
 - s.64(a): “may enter the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity” ; and
 - s.64(c) : "may enter the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health."



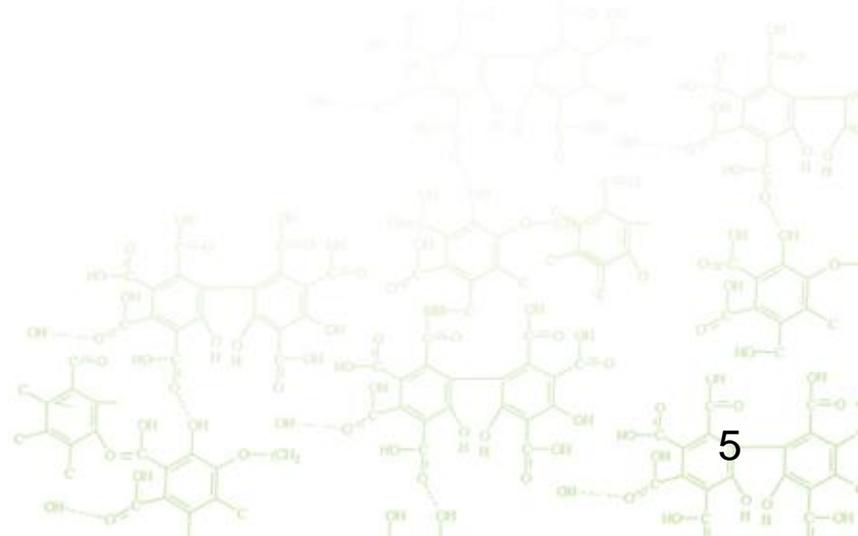
Four New Fluorotelomer-Based Substances

- Following the assessments of these four substances, the Ministers of Health and Environment imposed temporary prohibitions using the New Substances provisions of CEPA 1999.
 - Prohibition on manufacture and import
 - Four temporary Ministerial Prohibitions were published in the Canada Gazette, Part 1 (three on July 17, 2004, and a fourth on February 5, 2005)
 - Prohibitions under the New Substances provisions of CEPA 1999 expire after two years unless the Ministers propose a regulation to control the substances.
- The four substances were added to the *Prohibition of Certain Toxic Substances Regulations, 2012*
 - Prohibition on manufacture, use, sale, offer for sale and import, unless present in manufactured items.
 - Proposed regulations published in the *Canada Gazette, Part 1* on June 17, 2006
 - Final regulations published in the *Canada Gazette, Part 2* on October 13, 2010.



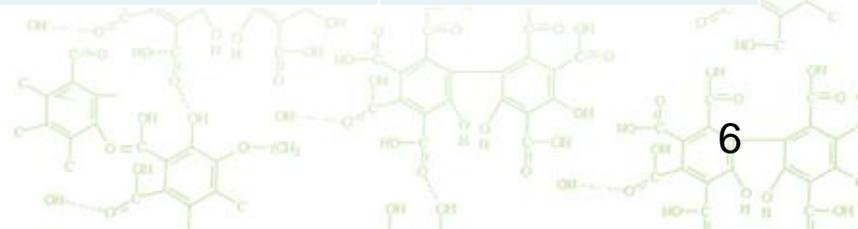
Action Plan

- In recognition that PFCAs and other precursor substances, similar to those four fluorotelomer-based substances, were already in commerce in Canada, the *Action Plan for the Assessment and Management of PFCAs* was published on June 17, 2006
- The Action Plan outlines measures for the assessment and management of PFCAs for Environment Canada and Health Canada.



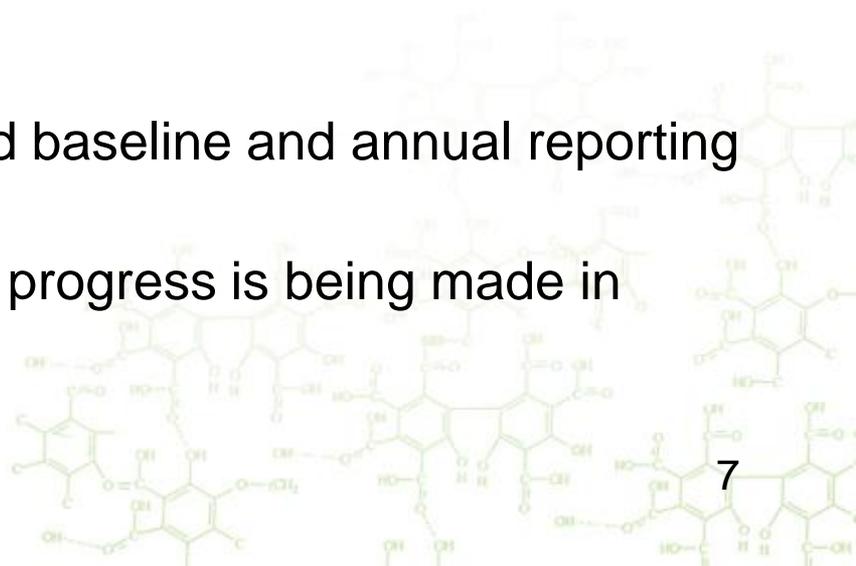
Action Plan Commitments for PFOA and LC-PFCAs

Measure	Action Taken	Date
Maintain current approach of prohibiting the introduction of new sources of PFCAs	Publication of <i>Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2005 (Four New Fluorotelomer-based Substances)</i>	October 2010
Address sources already in Canadian commerce	Voluntary Performance Agreement respecting PFCAs signed with industry	March 2010
Pursue further assessment of PFCAs and precursors already in Canadian commerce	Publication of Screening Assessment Reports for PFOA, its salts and its precursors, and LC-PFCAs, their salts and their precursors	August 2012
Advance scientific understanding of other possible sources	Implementation of a monitoring program (ecotoxicology, human exposure, environmental fate and distribution)	Ongoing (Since 2006)
Engage other regulatory jurisdictions	Participation in the PFC Steering Group of the OECD, and many workshops and conferences	Ongoing



Voluntary Agreement

- A voluntary Environmental Performance Agreement respecting PFCAs and their precursors in perfluorochemical products sold in Canada was signed in March 2010
 - Perfluorochemical products include fluoropolymers, fluoropolymer dispersions and fluorotelomer-based substances. They exclude end products and formulated items (i.e. paints, cleaners and surface treatments), the items they are applied to and manufactured items.
- The agreement includes targets to reduce PFOA, LC-PFCAs and their precursors which are present in the form of residuals or impurities in perfluorochemical products currently in commerce in Canada:
 - 95% reduction by December 31, 2010
 - Elimination by December 31, 2015
- Participating companies have submitted baseline and annual reporting data
- Reported data indicates that significant progress is being made in reaching the reduction targets



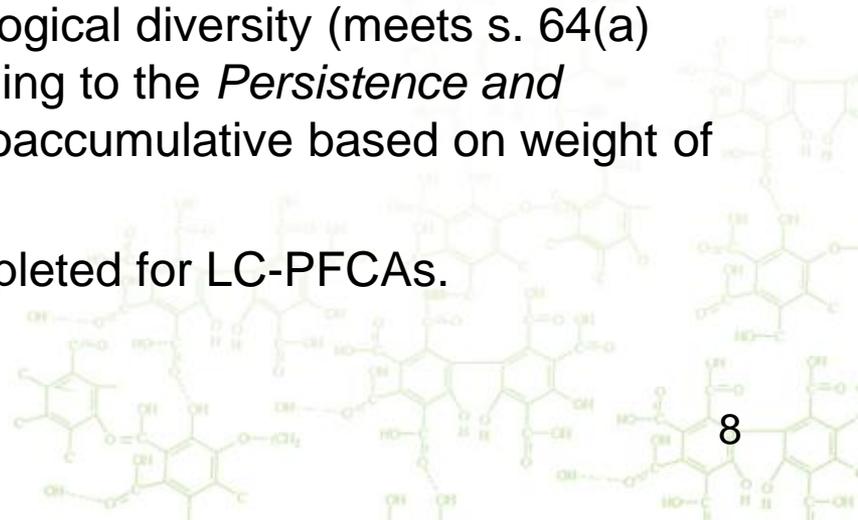
Screening Assessment Conclusions

PFOA, its salts and precursors

- **Ecological Concern:** found to have or may have an immediate or long-term harmful effect on the environment or its biological diversity (meets s. 64(a) criteria). Also found to be persistent, according to the *Persistence and Bioaccumulation Regulations, 2000*, and bioaccumulative based on weight of evidence.
- **Not found to be a health concern** at current exposure levels.

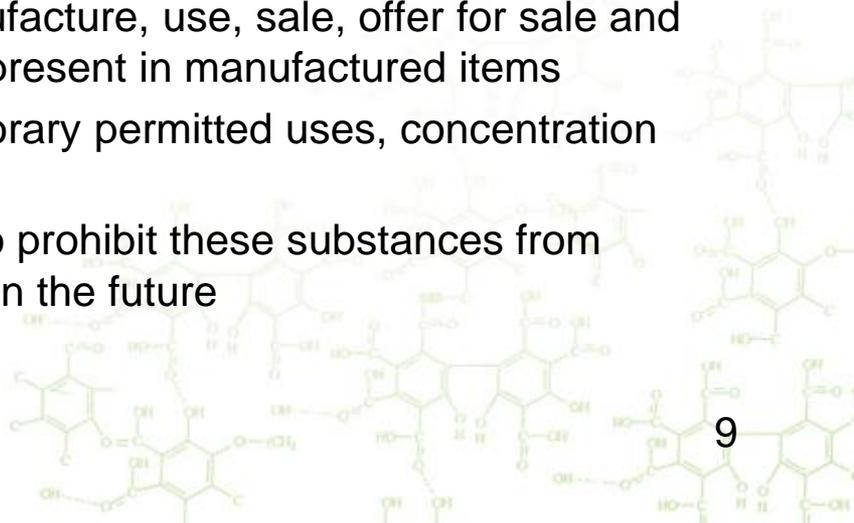
Long-chain PFCAs, their salts and precursors

- **Ecological Concern:** found to have or may have an immediate or long-term harmful effect on the environment or its biological diversity (meets s. 64(a) criteria). Also found to be persistent, according to the *Persistence and Bioaccumulation Regulations, 2000*, and bioaccumulative based on weight of evidence.
- **Health Assessment** has not yet been completed for LC-PFCAs.



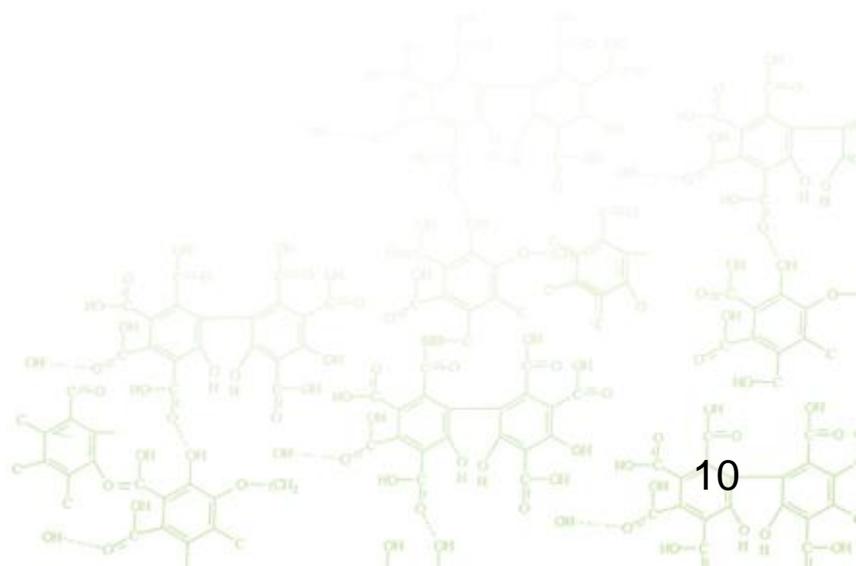
Proposed Risk Management

- The Government of Canada published a document on the proposed risk management approach for PFOA and LC-PFCAs for a 60-day public comment period (August 2012)
 - The document proposed to prohibit PFOA and LC-PFCA through regulations
- A consultation document on the proposed risk management measure for PFOA and LC-PFCA was published for a 30-day public comment period (January 2014)
 - The document proposed to add PFOA and LC-PFCAs to the *Prohibition of Certain Toxic Substances Regulations, 2012*
 - The *Regulations* would prohibit the manufacture, use, sale, offer for sale and import of PFOA and LC-PFCAs, unless present in manufactured items
 - Accommodations (permitted uses, temporary permitted uses, concentration limits) will be considered
 - Additional risk management measures to prohibit these substances from manufactured items may be considered in the future



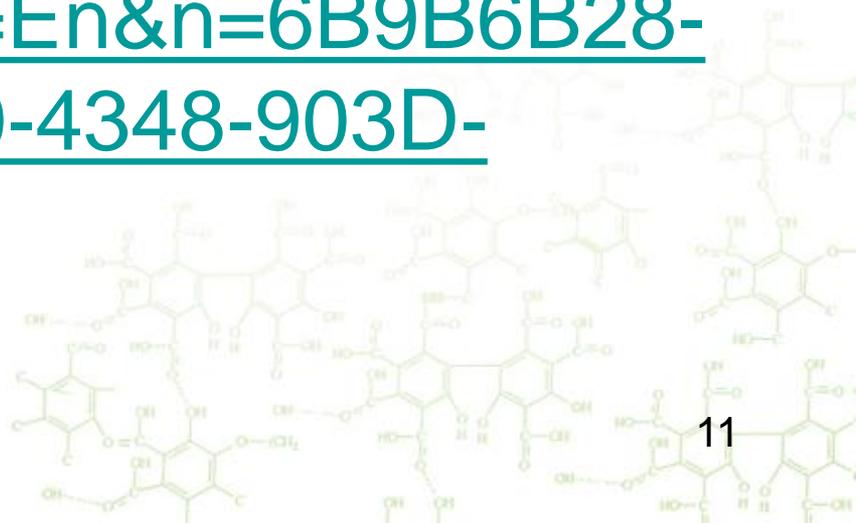
Upcoming and Ongoing Activities

- Pending publication of the proposed Amendments to the *Prohibition of Certain Toxic Substances Regulations*
- Continued work on the Environmental Performance Agreement for PFCAs (final report year: 2015)
- Ongoing engagement and cooperation with other countries



Information Sources

- Four new fluorotelomer-based substances:
<http://www.ec.gc.ca/toxiques-toxics/Default.asp?lang=En&n=0593FBA5-1>
- PFOA and LC-PFCAs:
<http://www.ec.gc.ca/toxiques-toxics/Default.asp?lang=En&n=6B9B6B28-1&xml=F68CBFF1-B480-4348-903D-24DFF9D623DC>



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