Great Lakes Preliminary Environmental Assessment

Binational Toxics Strategy

Level 1 Compounds

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Level 1 Compounds

Do we have environmental data to assess trends and impact of the substances in the Basin?

- Mercury, Alkyl Lead
- PCBs, Dioxins/Furans
- HexCB, Octachlorostyrene
- BaP
- Aldrin, Dieldrin, Mirex
- Chlordane, Toxaphene
- DDT

Great Lakes Contaminants Surveillance Programs

Analyte	Air	Water	Aquatic Biota	Terrestrial Biota	Sediment
Mercury	EC-CAMNet US-MDN	EC-o & c	DFO-f & I US-GLFMP	EC-gulls/turtle	EC-NWRI CAN-CSP
PCBs	IADN	EC-o & c	DFO-f & I US-GGLFMP CAN-GLFCSP	EC-gulls/turtle	EC-NWRI CAN-CSP
Dioxin/ Furan	EC-NAPS/IADN US-NDAMN	EC- c	DFO-f & I CAN-GLFCSP	EC-gulls/turtle	EC-NWRI
HexCB	IADN EC-NAPs	EC-o & c	DFO-f & I US-GLFMP	EC-gulls/turtle	EC-NWRI CAN-CSP
BaP	IADN EC –NAPs	EC-o & c	X	X	EC-NWRI CAN-CSP

Green-routine Yellow-infrequent / o & c-open water & connecting channel / f & i-fish and invertebrates

Great Lakes Contaminants Surveillance Programs (cont.)

Analyte	Air	Water	Aquatic Biota	Terrestrial Biota	Sediment
OCstyrene	EC-NAPs	EC-o & c	US-GLFMP CAN-GLFCSP	EC-gulls/turtle	EC-NWRI CAN-CSP
Alkyl Lead	X	X	X	X	X
Aldrin	IADN	EC-o & c	DFO-f & I US-GFLMP CAN-GLFCSP	X	EC-NWRI
Dieldrin	IADN	EC-o & c	DFO-f & I US-GFLMP CAN-GLFCSP	EC-gulls/turtle	EC-NWRI
Mirex	IADN	EC-o & c	DFO-f & I US-GFLMP CAN-GLFCSP	EC-gulls/turtle	EC-NWRI
Chlordane	IADN	EC-o & c	DFO-f & I US-GFLMP CAN-GLFCSP	EC-gulls/turtle	EC-NWRI
Toxaphene	IADN	EC-o & c	DFO-f & I US-GFLMP CAN-GLFCSP	X	EC-NWRI
ΣDDT	IADN	EC-o & c	DFO-f & I US-GFLMP CAN-GLFCSP	EC-gulls/turtle	EC-NWRI CAN-CSP

Green-routine Yellow-infrequent / o & c-open water & connecting channel / f & i-fish and invertebrates

Other Important Contaminants Surveillance Programs

Analyte	Human Monitoring	Fish Advisories
Mercury	USEPA: NHANES	USEPA: NLFWA
PCBs	USEPA: NHANES	USEPA: NLFWA
Dioxin/Furan	USEPA: NHANES	USEPA: NLFWA
HexCB	USEPA: NHANES	USEPA: NLFWA
BaP	X	USEPA: NLFWA
OCstyrene	X	USEPA: NLFWA
Alkyl Lead	X	X
Aldrin	X	USEPA: NLFWA
Dieldrin	X	USEPA: NLFWA
Mirex	USEPA: NHANES	USEPA: NLFWA
Chlordane	USEPA: NHANES	USEPA: NLFWA
Toxaphene	X	USEPA: NLFWA
ΣDDT	USEPA: NHANES	USEPA: NLFWA

Green-routine Yellow-infrequent / o & c-open water & connecting channel / f & i-fish and invertebrates

Summary of Data, Criteria and Trends

Analyte	Air	Water	Aquatic Biota	Terrestrial Biota	Sediments	Human Monitoring	Fish Advisories
Mercury	~	~	V	V/~	V	-	-
PCBs	V	V	V	V	V	-	-
Dioxin/Furan	V	?	V	V/~	V	-	-
HexCB	V	V	~	V	V	-	-
BaP	~	~	X	X	~	X	?
OCstyrene	-	~	-	V/~	V	X	-
Alkyl Lead	X	X	X	X	X	X	X
Aldrin	-	~	V	X	~	X	X
Dieldrin	V	V	V	V	~	X	-
Mirex	-	~	V	V/~	V	~	-
Chlordane	V	~	V	V	V	-	-
Toxaphene	~	?	~	X	?	X	-
ΣDDT	V	~	V	V	V	V	-

Criteria: red-above criteria green-below criteria white-no comparison

Trends: Λ-increasing V-decreasing ~-stable --no trend available

Preliminary Findings

- Encouraging Trends in Most Media;
- Still have Exceedences for Mercury, PCBs, Dioxin, HCB, most Pesticides, most notably via *Fish Advisories*;
- Criteria/benchmarks lacking for much of the Data (e.g., air, terrestrial biota);
- No data for Alkyl Lead

Recommended Next Steps

- Commence Workgroup Analyses in a Phased Approach
- Develop Reporting Format
- Validate/Supplement Environmental Information
- Modified Step 3 Report for Sources
  - OCS – draft by 9/04
  - Dioxins/Furans – draft by 12/04
  - Others – drafts by 2/05