



Presentation to:
Neighbourhood Liaison Committee
Highland Creek Treatment Plant
November 12, 2012

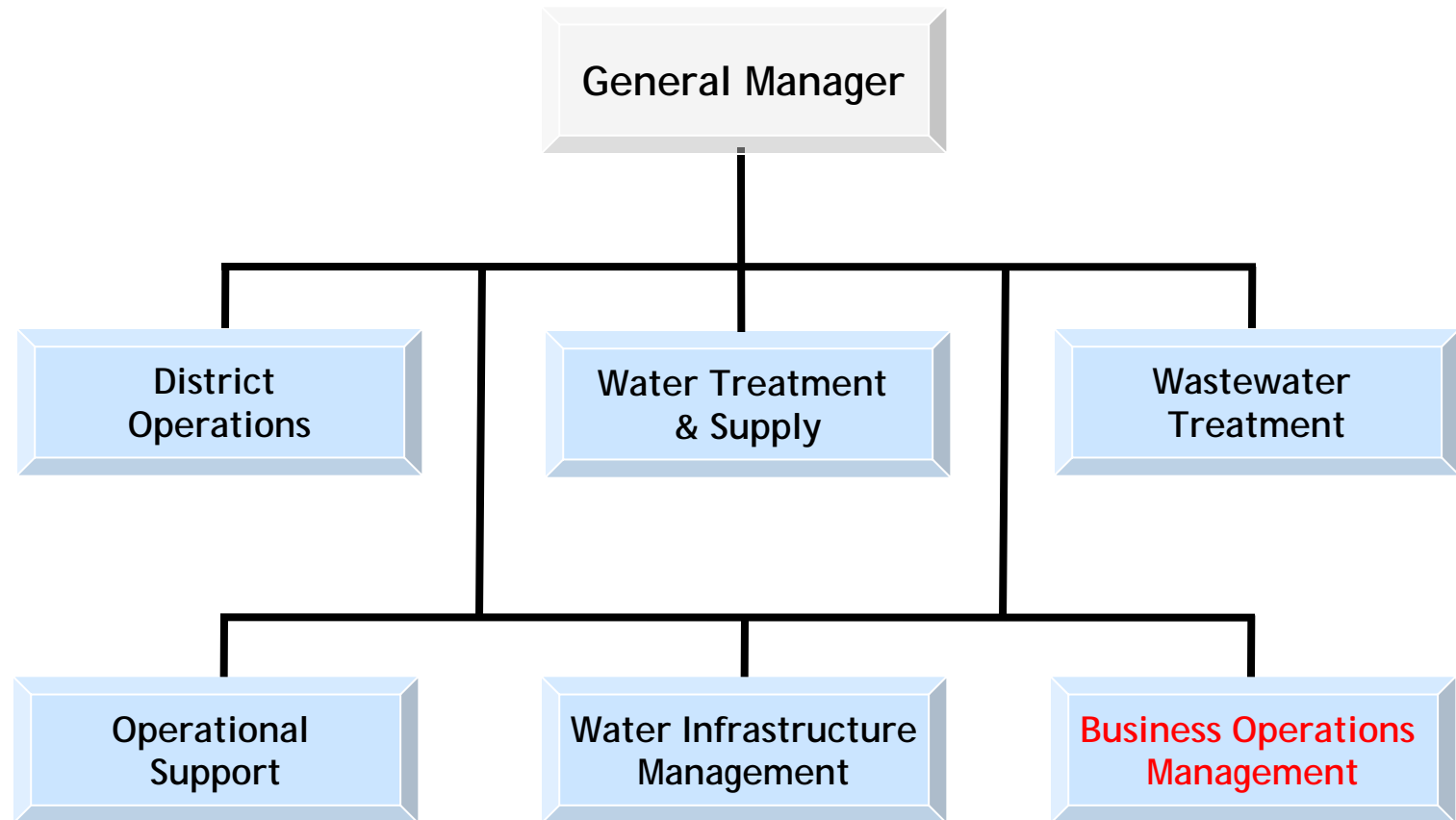
Toronto Water:
Overview of Sewers Bylaw

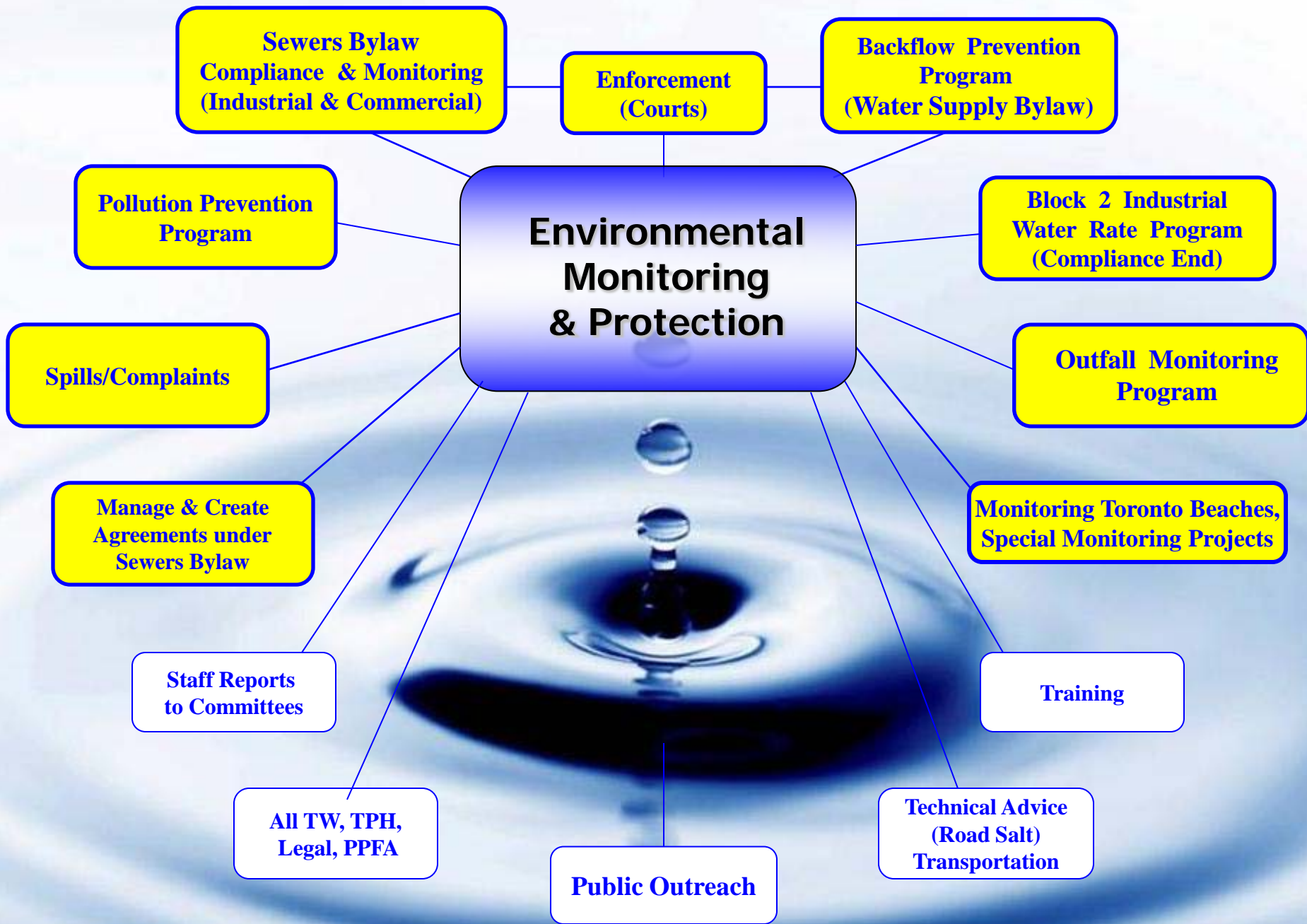
Vijay Ratnaparkhe
Supervisor, Environmental
Monitoring & Protection
Toronto Water





Toronto Water Structure







Environmental Monitoring and Protection (EM&P)

- 51 FTEs
- Management, Engineer, Provincial Offences Officers
- Sewers & Water Supply Bylaws
- 3 Key Sections:
 - Industrial Waste Control Group
 - Stormwater Quality Group
 - Backflow Prevention Group:
 - Administers Backflow Program
 - Premise Isolation BFP devices at ICI (after water meter)





Sewers By-law (Municipal Code Chapter 681) Objectives

- Regulate the quality of storm and sanitary discharges into City's storm & sanitary sewers
- Improve WWTP bio-solids quality
- Protect natural environment and long term health of receiving waters and to protect public health and safety
- Maintain sewer systems and wastewater treatment processes
- Comply with Federal and Provincial legislation



City of Toronto

4 Wastewater Treatment Plants



Ashbridges Bay Treatment Plant at 9 Leslie Street



ABTP

818,000 m³/day

NTTP

35000 m³/day

HCTP

220,000m³/day

HTP

473,000 m³/day

Lake Ontario

14th largest fresh water lake in the world





City of Toronto

4 Drinking Water Treatment Plants



R.L. Clark Water Treatment Plant



Harris TP



F.J Horgan TP

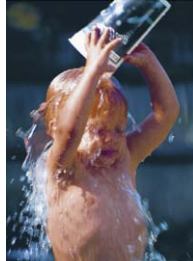


Island TP

Lake Ontario

14th largest fresh water lake in the world





Toronto Sewers By-Law **Highlights**

- Discharge Limits and requirements for the Sanitary, Combined, and Storm sewers
 - Inclusion of 27 organics compounds (i.e. chloroform) and lower limits on 11 heavy metals = 38 Subject Pollutants
 - Requirement for: advanced waste amalgam separators in dental clinics; oil/water; sediment interceptors for auto repair, car washes
 - Best Management Practices for some commercial sectors and residential swimming pools
- Pollution Prevention (P2) Plan Requirements
 - Industrial, Commercial, Institutional (ICI) facilities require a P2 plan for 38 subject pollutants (i.e. Mercury, Chloroform)



TORONTO MUNICIPAL CODE § 681 SEWERS Limits

- **Table 1 — Limits for Sanitary and Combined Sewers Discharge**
- **Table 2 – Limits Storm Sewers Discharge**



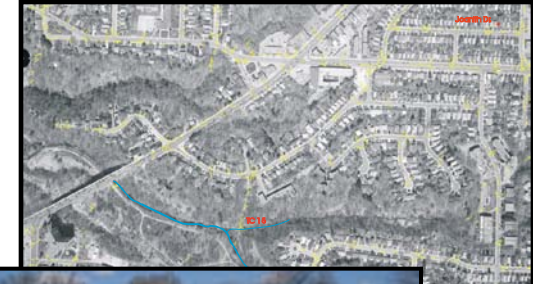
Sewers By-Law Highlights

- Surcharge Agreement fees generate ~\$8 - 9 Million annually
- Compliance Agreements - where dischargers are commencing correction of discharge but require time &/or equipment
- Report spills ASAP & Submit Spill reporting within 5 days
- Restaurants and food processors required to install and properly maintain grease Interceptors
- Penalties and Fines – up to **\$100K per day**



EM&P - Stormwater Quality Group

- Outfall Monitoring Program
 - Monitor storm outfall discharges; find cross connections and correct/eliminate
 - 6 Tributary Watersheds and Lake Ontario
- Beach & water quality monitoring



- Special Stormwater Projects



EM&P – Industrial Waste Control Group

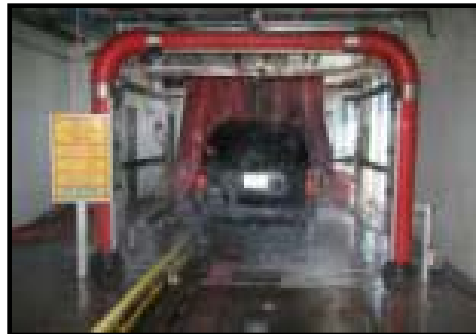
- Enforce Sewers & Water Supply Bylaws
- Monitors industrial discharges & on-site P2 plans & inspects for Backflow Prevention Devices & Water theft
- Respond to water pollution complaints, industrial- commercial spills
 - 24/7 Spill & Complaint Response

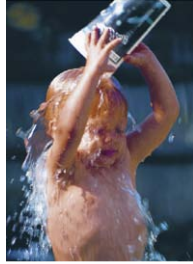




EM&P – Industrial Sampling & Inspections

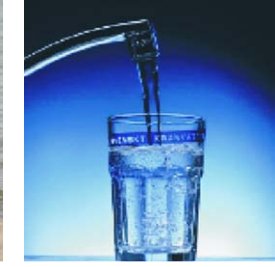
- Industries classified according to impact to sewer system:
 - **High Potential** – e.g.. Metal platers sampled once per month, inspected minimum yearly and frequently as required
 - **Medium Potential** – e.g.. Bakeries, sampled every 3 months, inspected yearly
 - **Low Potential** – typically commercial operations and inspected once every 3 years





EM&P – Spill Response





How EM&P interacts with food service establishments - Fats Oil & Grease (FOG)

- Typical Problems:
 - no grease interceptor; improperly sized grease interceptor &/or poor maintenance
 - Using additives in grease traps, drains – pump-out is still required; may cause other problems
- Site washing outdoors leading to storm sewer via catch basins and leading to nearest creek/river
 - cover catch basins with mats and use vac truck for pick up



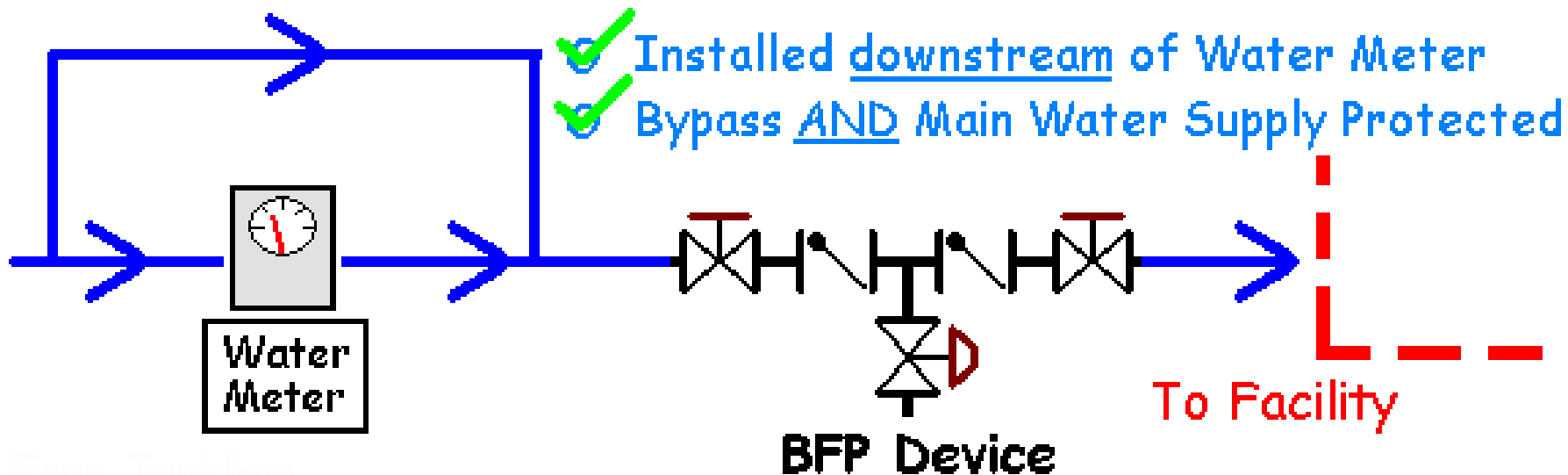


Backflow Prevention Group

- **Over 30,000 Industrial Commercial, and Institutional facilities impacted.**
- **Requirement to install a Premise Isolation Backflow prevention device.**
- **Facilities categorized as Severe and Moderate risk of contamination**



Backflow Prevention Group





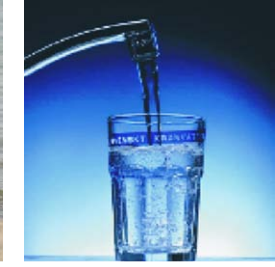
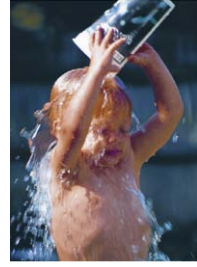
What's New Since 2007

- **TPH Referral for restaurant non –compliance**
- **Two dedicated By-Law Officers for restaurant inspections**
- **Inspections based on TPH referrals or Sewer Blockage issues**



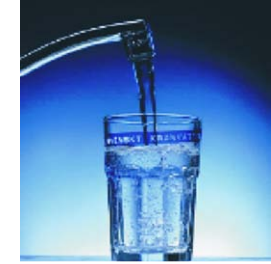
What's New Since 2007

- **Added BMPs for Photo finishing operations**
- **BMPs and Brochures for swimming pool discharges (by-law amendment)**
- **Fines increased in the by-law**
- **Authority to issue Orders and Work Orders**



Notable Activities

- **Found and fixed 551 Cross Connections under the Outfall Monitoring Program**
- **Significant increase in Enforcement, Surcharge Revenue, and Fines**



2008 to 2011 Stats

	2008	2009	2010	2011
Number of Samples	3029	3565	4187	6523
Number of Inspections	1354	1869	2139	2482
Number of Violation Notices Issues	859	718	1117	982
Number of Prosecutions	7	14	28	50
Fines	\$ 38,237	\$21,500	\$27,500	\$ 181,250
Industrial Waste Surcharge (in Millions)	-	\$7.03	\$ 8.61	\$ 9.37
Restaurant Referrals from TPH	-	643	4213	47
Backflow Inspections	-	381	675	855

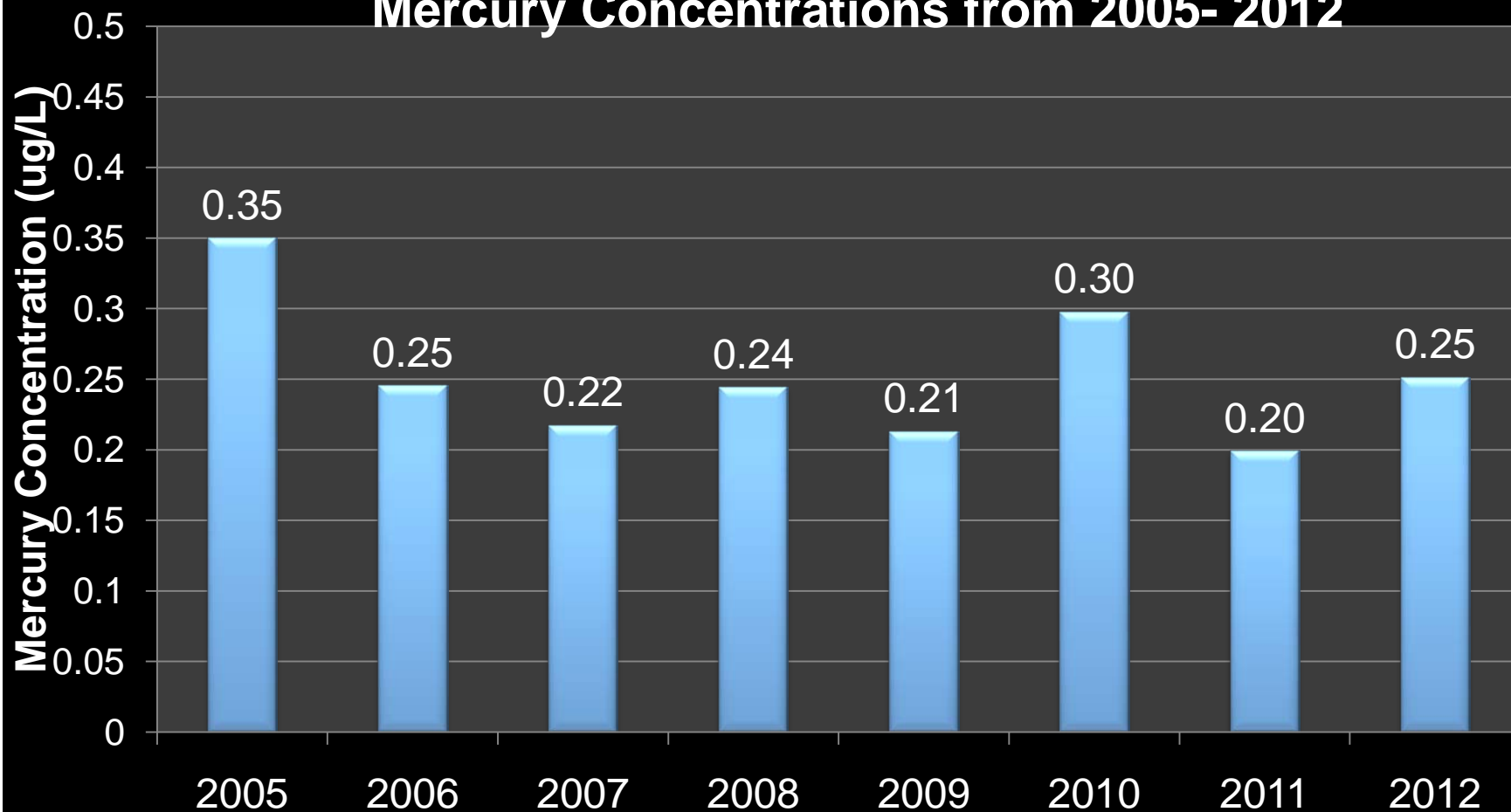


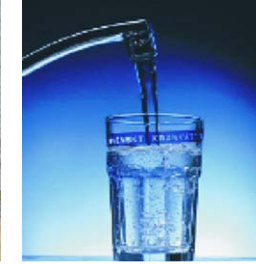
Work Done in HCTP Sewer Shed

- **Total Inspections ~ 3800 (2008 - 2012)**
- **Dental Clinic Inspections ~ 300 (2007 - 2012)**
- **Number of Industries with IWSA 30 (current)**
- **Number of Restaurant Inspections ~ 470 (2010 - 2012)**

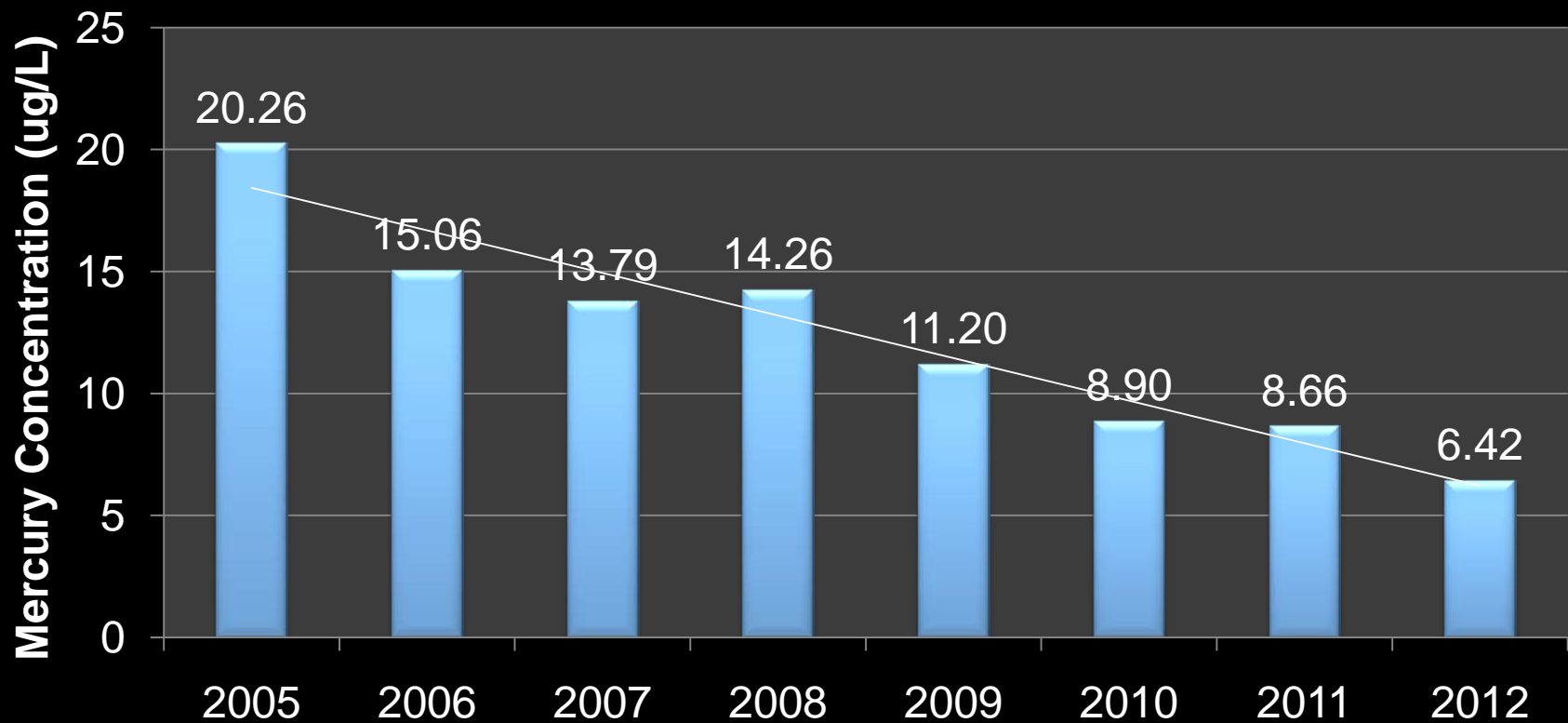


Highland Creek Treatment Plant Average Influent Mercury Concentrations from 2005- 2012



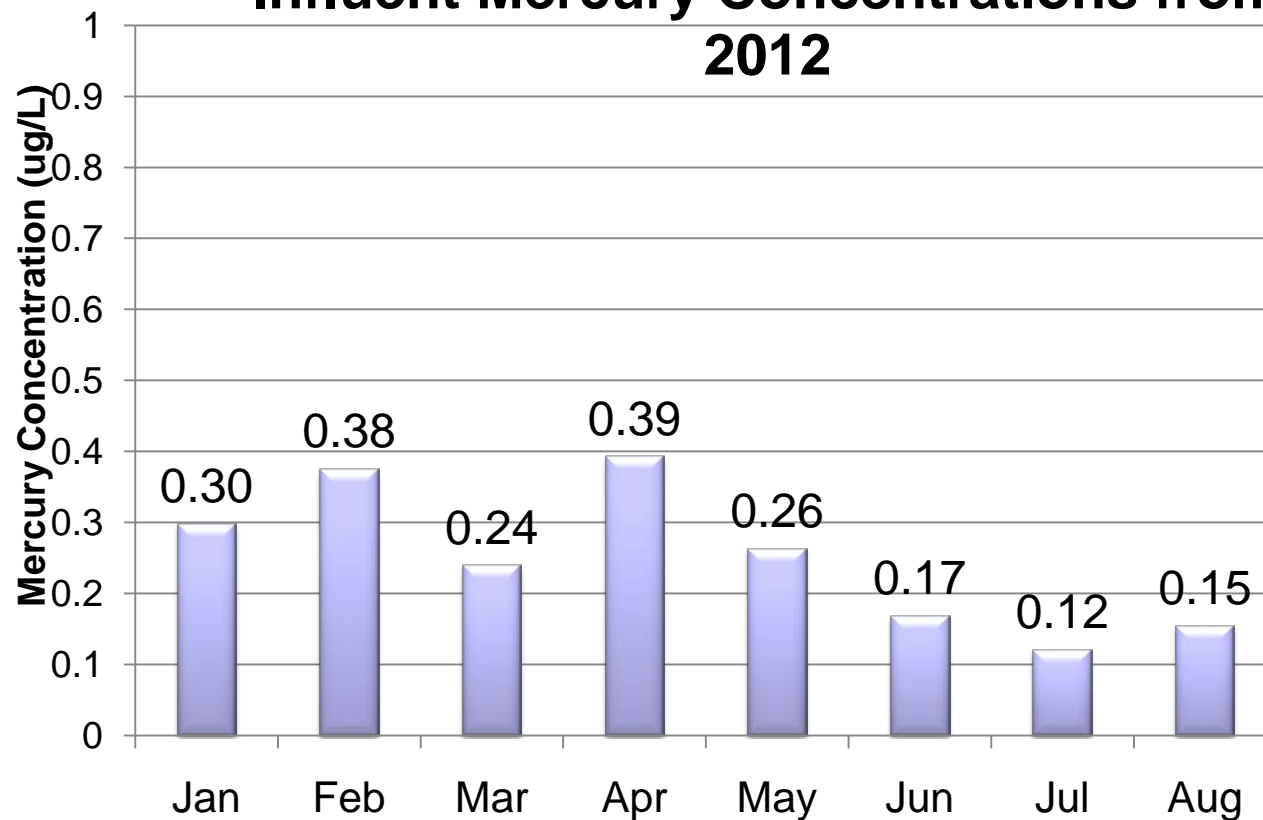


Highland Creek Treatment Plant Average Dewatering Sludge Mercury Concentrations from 2005- 2012





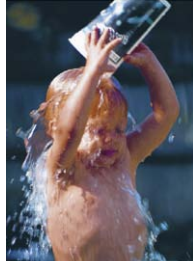
Highland Creek Treatment Plant Influent Mercury Concentrations from 2012





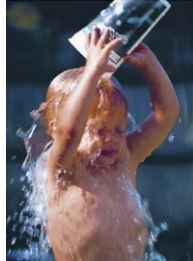
Major Contributors to Highland Creek Sewershed

- Major contributors of wastewater:
- Metal finishers
- Paperboard
- Food processing
- Chemical manufacturing
- Dental clinics
- Restaurants



Environmental Monitoring and Protection





Questions?

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Toronto Water

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