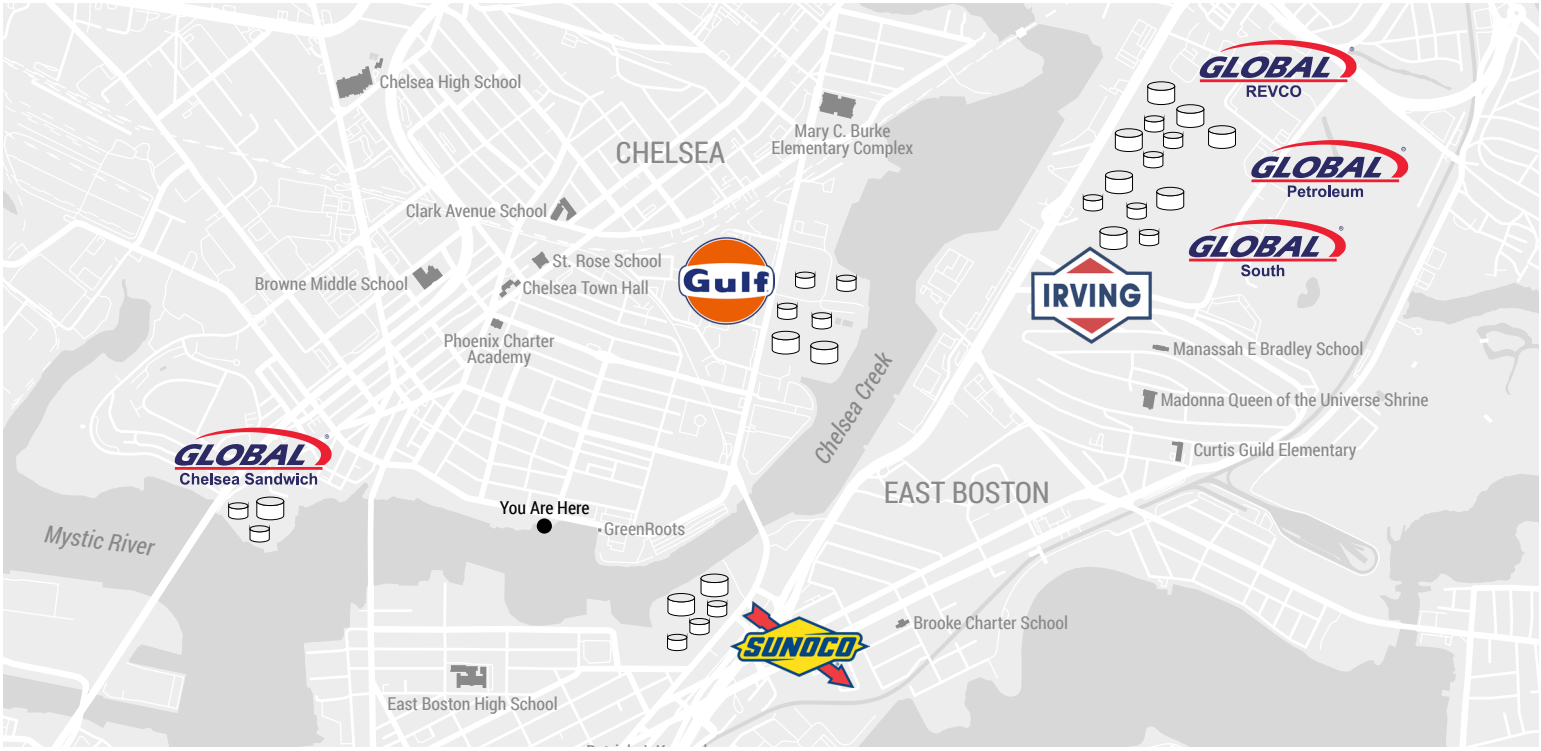
# Chemicals in the Creek

Fold Flap ↓

A Performance of the 76 NPDES Violations from the Oil Facilities on Chelsea Creek from 2013-2017

Supported by GreenRoots ECO Crew, MIT, Northeastern University, and funding from CRESSH




| COMPANY LOGO | CHEMICAL EXCEEDANCES 2013 | 2014 | 2015 | 2016 | 2017 | TOTAL |
|---|---|---|---|---|---|---|
| GLOBAL Chelsea Sandwich | 1 | 1 | 6 | 1 | 1 | 10 |
| GLOBAL REVCO | 1 | 9 | 3 | 1 | | 13 |
| GLOBAL Petroleum | 4 | 5 | 5 | 4 | 1 | 19 |
| GLOBAL South | 2 | | 2 | | | 4 |
| Gulf | 4 | 1 | | 1 | 4 | 10 |
| IRVING | 2 | 2 | 3 | 1 | 2 | 10 |
| SUNOCO | | | 2 | 4 | 4 | 10 |
| | | | | | TOTAL VIOLATIONS | 76 |

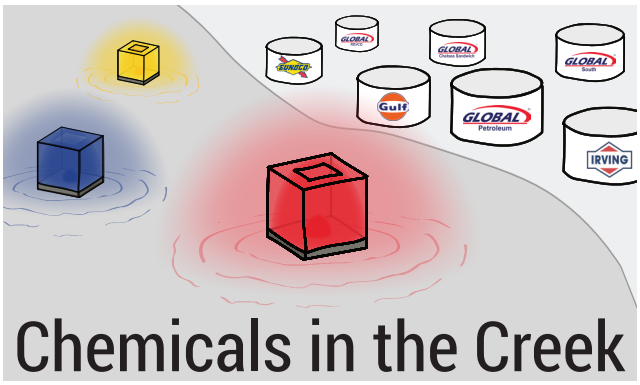
LANTERN KEY

- BENZENE
- BENZO[A]PYRENE
- BTEX
- METHYL TERT-BUTYL ETHER (MTBE)
- NAPHTHALENE / OIL AND GREASE
- pH
- TOTAL SUSPENDED SOLIDS (TSS)

**Welcome!** In the past 5 years the 7 oil storage facilities on Chelsea Creek have violated their Clean Water Act permits 76 times (see map below). The Clean Water Act is a federal law that limits how much and what kinds of harmful chemicals can be put into waterways.

In this performance, we commemorate each of those violations with a lantern. The lantern color represents the chemical released (see Key on the back).

We hope these lanterns will shed light on the problem of chemicals being released into the creek and begin a community conversation about improving industrial accountability.

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### Are chemicals in the creek a risk to my family?

No, unless you consume fish caught in the creek or spend large amounts of time near the oil storage facilities, your family is likely not at risk from exposures by these routes. You are more likely to be exposed to these pollutants through car exhaust or other sources.

### Why are these violations concerning?

- The chemicals may impact the health of fish and plants in the creek.
- Though the violation information is online, it is difficult to access and most people don't know about it.
- The Environmental Protection Agency (EPA), who should respond to these violations, does not have the resources to adequately follow up on them.
- The EPA does not consider the overall impact of the local industries on the environment and the community.

### What other justice issues in Chelsea relate to this?

- The facilities also release many of these chemicals into the air. These releases may more directly impact the health of people in the community.
- These emissions combine with other environmental problems to increase the burden on Chelsea residents.
- Though it impacts their environmental and health, Chelsea residents have little say in the zoning and industrial activity on their waterfront.
- Other violations made by Chelsea residents, such as traffic violations, may be treated as more serious than these industrial violations. This shows that companies may be held to a different standard than community members.

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**Benzene**, a common but harmful chemical is formed when engines burn gasoline. It can kill plants and animals or make it difficult for them to reproduce. Benzene can harm people's immune and reproductive systems, and cause cancer, dizziness, and headaches.
**Total Violations: 9**

**Benzo[a]pyrene (BaP)**, is a common but harmful chemical formed when gas, oil, wood, cigarettes, or food are burned. BaP can cause deformities or death in plants and fish. In humans, it can cause cancer, increase the risk of miscarriage, and harm kids' development.
**Total Violations: 7**

**Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)**, are common but harmful chemicals that are released when oil is spilled and as engines burn gas. BTEX evaporates into the air quickly and can harm the heart and brain and cause dizziness and cancer.
**Total Violations: 3**

**Methyl Tert-Butyl Ether (MTBE)**, is a common but harmful chemical added to gasoline so it burns more cleanly. Breathing it can irritate the nose and throat and cause headaches, nausea, dizziness and confusion. It can harm the liver, kidney, and nervous system.
**Total Violations: 2**

**Naphthalene**, a common but harmful chemical, comes from mothballs and burning fuel. At high levels it can cause pneumonia and liver damage. It can harm fish and plants, and it can effect human skin. **Oil & Grease** interfere with marine life and create a film on the water.
**Total Violations: 2**

**The pH** is the acidity of water. Changing it even slightly can kill marine life and plants or prevent them from reproducing. Because of this, pH can have an important impact on local ecosystems.
**Total Violations: 17**

**Total Suspended Solids (TSS)**, make it harder for plants and animals in the water to get oxygen and sunlight. Harmful chemicals can also stick to TSS. Common TSS are sewage, bacteria, microbeads from soap, dust, and pieces of asphalt or rubber.
**Total Violations: 36**

**INTERESTED IN LEARNING MORE?**
- Visit tinyurl.com/ChemInCreekSignup to stay connected with the project.
- Visit tinyurl.com/ChemsInCreek for information on the data methods used.

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November 8
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Chelsea Creek

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