



ENVIRONMENTAL FACT SHEET

City of New Bedford's Environmental Investigation of the Wetland Adjacent to the Keith Middle School

City of New Bedford/TRC, August 2012

This fact sheet describes what the City has done to determine that it is safe for people to play and work at the campus of Keith Middle School and to use their private property near the wetland while environmental work at the wetland continues. The fact sheet also summarizes findings from the investigation of the wetland and the next steps to address the findings. Terms in bold are defined in the Glossary of Terms at the end of the fact sheet.

It is safe for people to use the campus at Keith Middle School and to work in their nearby yards.

The City hired a contractor to remove **polychlorinated biphenyl (PCB)** impacted sediment (soil that is under water) from the wetland adjacent to the Keith Middle School. Removal occurred in 2006. As part of the *Long-Term Maintenance and Monitoring Implementation Plan* that was developed for the Keith Middle School property in October 2006, the City collects sediment samples from randomly selected locations along the bottom of the **cap** slope once a year and has the samples analyzed for PCBs. In May 2008, one of these sediment samples from the northern wetland (the wetland area north of the land bridge as shown in Figure 1) had **PCB** levels that were higher than the U.S. Environmental Protection Agency (EPA) action level and the level that must be reported to the Massachusetts Department of Environmental Protection (MassDEP). The City notified EPA and MassDEP of the finding. In December 2009, the City completed installation of a locked, chain-link perimeter fence to prevent human contact with the northern wetland while further environmental work is conducted at the wetland. The fence reminds people to keep away from the northern wetland until work is completed. Meanwhile, it is safe for maintenance staff and other officials to work on the land area (mow the grass, etc.) inside the fence as needed, and it is safe for maintenance staff and residents to use the land that is outside the fence.

Findings from Studies Conducted to Date

The City, in collaboration with its environmental consultant, TRC Environmental Corporation (TRC), developed an **Immediate Response Action (IRA)** Plan to evaluate the wetland sediments in 2008. Additional sediment samples were collected from 2008 through 2012. An **IRA** Completion Report was issued in October 2010 that described the **IRA** investigation and the perimeter fence installation.

In January 2012, the City submitted a **Phase II Comprehensive Site Assessment (CSA)** Report to MassDEP for the wetland adjacent to the Keith Middle School. The Phase II CSA included the results of investigations conducted through May 2011. This information was used to identify steps for protecting the health of people and the environment.

Approximately 356 sediment samples and 24 surface water samples were collected from the wetland. In addition, approximately 187 soil samples were collected from the wetland and also from upland areas adjacent to the wetland. Approximately 26 groundwater samples were collected from monitoring wells near the wetland. Samples were tested for metals, **PCBs**,

polyaromatic hydrocarbons (PAHs), and VOCs. In addition, 7 sediment samples underwent biological testing to support the ecological assessment.

The Phase II CSA Report includes a risk characterization of the wetland and adjacent upland areas. The risk characterization was conducted to learn whether **PCBs, PAHs, VOCs** or metals are affecting wetland **organisms, wetland wildlife**, or residents and maintenance staff living or working near the wetland. A condition of No Significant Risk, as defined by the Massachusetts Contingency Plan, exists for residents, maintenance staff and wildlife using the southern wetland area (south of the land bridge) and the upland areas that are outside the fence. TRC also determined that potential exposures to soils within the fenced northern wetland do not pose a significant risk to maintenance staff and other officials who work on the land. Groundwater poses No Significant Risk, even if used as drinking water. However, a condition of No Significant Risk does not exist for sediment in the fenced northern wetland for people or wildlife; further remediation work is needed.

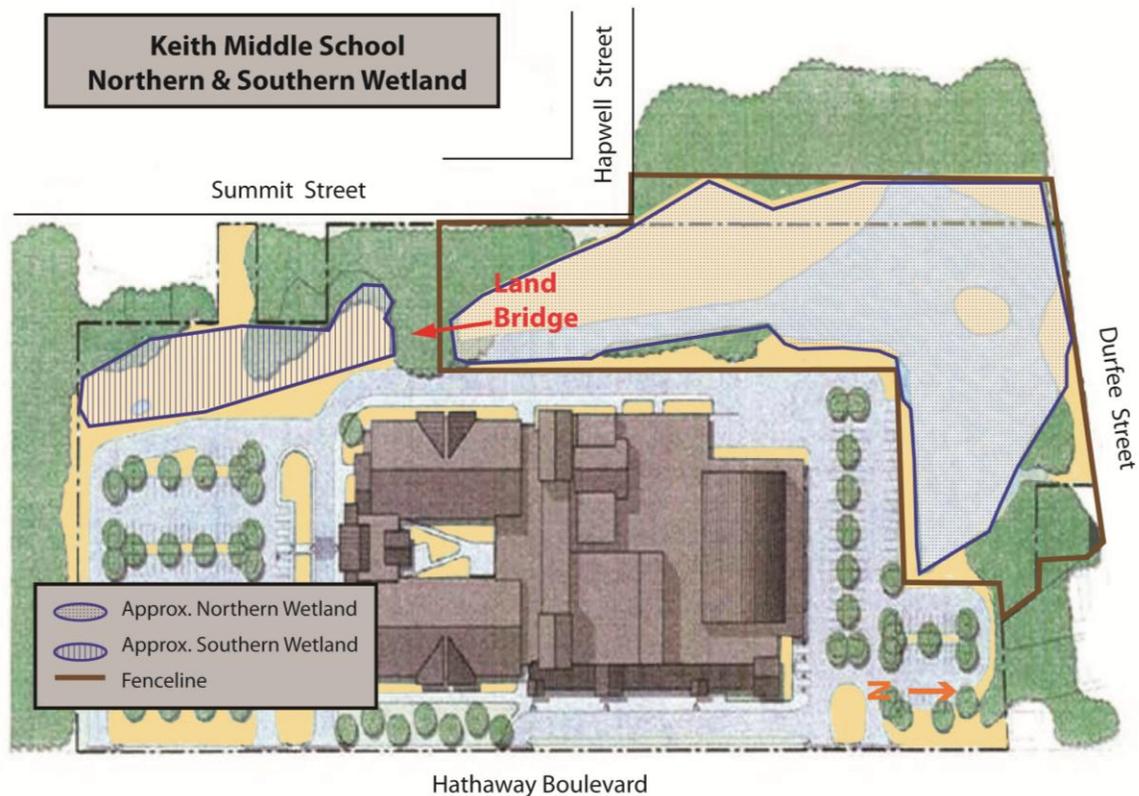
The Next Steps

The City will release a draft **Phase III Remedial Action Plan** report that identifies, evaluates and selects a remedial plan for the northern wetland in 2012. The draft report will be available for public comment for a minimum of 20 days prior to submittal to MassDEP. The City will continue to post at its website all reports and chemical concentration data for the wetland.

For More Information

Data related to the wetland are posted at the City's website <http://www.newbedford-ma.gov/McCoy/sitemap/sitemap.html>; filed under the "Wetlands" button. Details about TRC's investigation of the wetland are provided in the August 2008 **Immediate Response Action Plan** for Release Tracking Number 4-21300, **IRA** Status Reports dated October 2008, April 2009, September 2009, and March 2010, the **IRA** Completion Report dated October 2010, and the Phase II CSA Report dated January 2012. The other sampling and inspections that are part of the *Long-Term Maintenance and Monitoring Implementation Plan* at Keith Middle School are the subjects of a separate fact sheet also posted at the City's website. If you have additional questions, please contact Cheryl Henlin, City of New Bedford Environmental Stewardship Department, at (508) 991-6188 or by email at cheryl.henlin@newbedford-ma.gov.

Figure 1



GLOSSARY OF TERMS

Cap – The three feet of clean backfill in landscaped areas and the two feet of clean backfill in paved areas, as well as the fabric underneath these soil layers, that was brought to the site when the school was being built in 2006. This fabric and the soil on top of it keep people from coming into contact with underlying soil.

Polyaromatic hydrocarbons (PAHs) – A group of over 100 different chemicals formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot. Some PAHs are manufactured and found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides or are components of petroleum.

Polychlorinated biphenyls (PCBs) – Mixtures of up to 209 individual chlorinated compounds. There are no known natural sources of PCBs. Some PCBs can exist as vapor in air to a limited extent. PCBs have no known smell or taste. In the past, PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they do not burn easily and are good insulators.

Organism – An individual form of life that is capable of growing, processing nutrients, and usually reproducing such as animals (fish, birds) and the extremely small forms of life that can be seen with a microscope.

Immediate Response Action (IRA) – An assessment and/or remedial action that is started as soon as possible after an issue has been identified to address time-critical site conditions.

Phase II Comprehensive Site Assessment (CSA) – An investigation of a site that describes its history, the nature and extent of chemical impacts, hydrogeological conditions (groundwater distribution and dynamics within soil and bedrock), fate and transport characteristics of chemicals found at the site and a characterization of risk posed by the site to health, safety, public welfare and the environment.

Phase III Remedial Action Plan – For sites where closure is not yet possible due to a risk determination, this plan identifies and evaluates a range of remedial options for the site, and selects one of the remedial options for implementation at the site based on a variety of prescribed evaluation criteria.

Volatile organic compounds (VOCs) – VOCs include a variety of chemical compounds given off as gases from certain solids or liquids. VOCs are given off by a wide array of products numbering in the thousands. Examples of products that can give off VOCs when in use, and to some degree when stored, include: paints, lacquers, strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment such as copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, photographic solutions, and fuels and other petroleum-containing products.