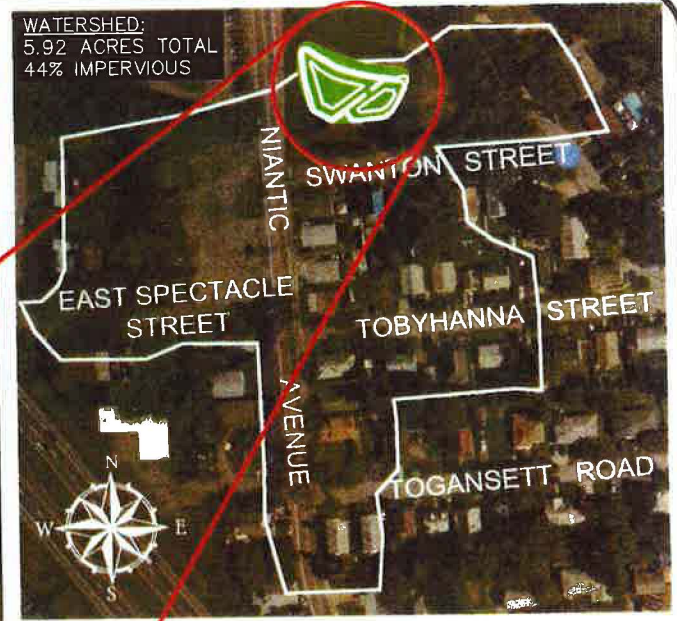



Option 2: Construct New Drainage Structure

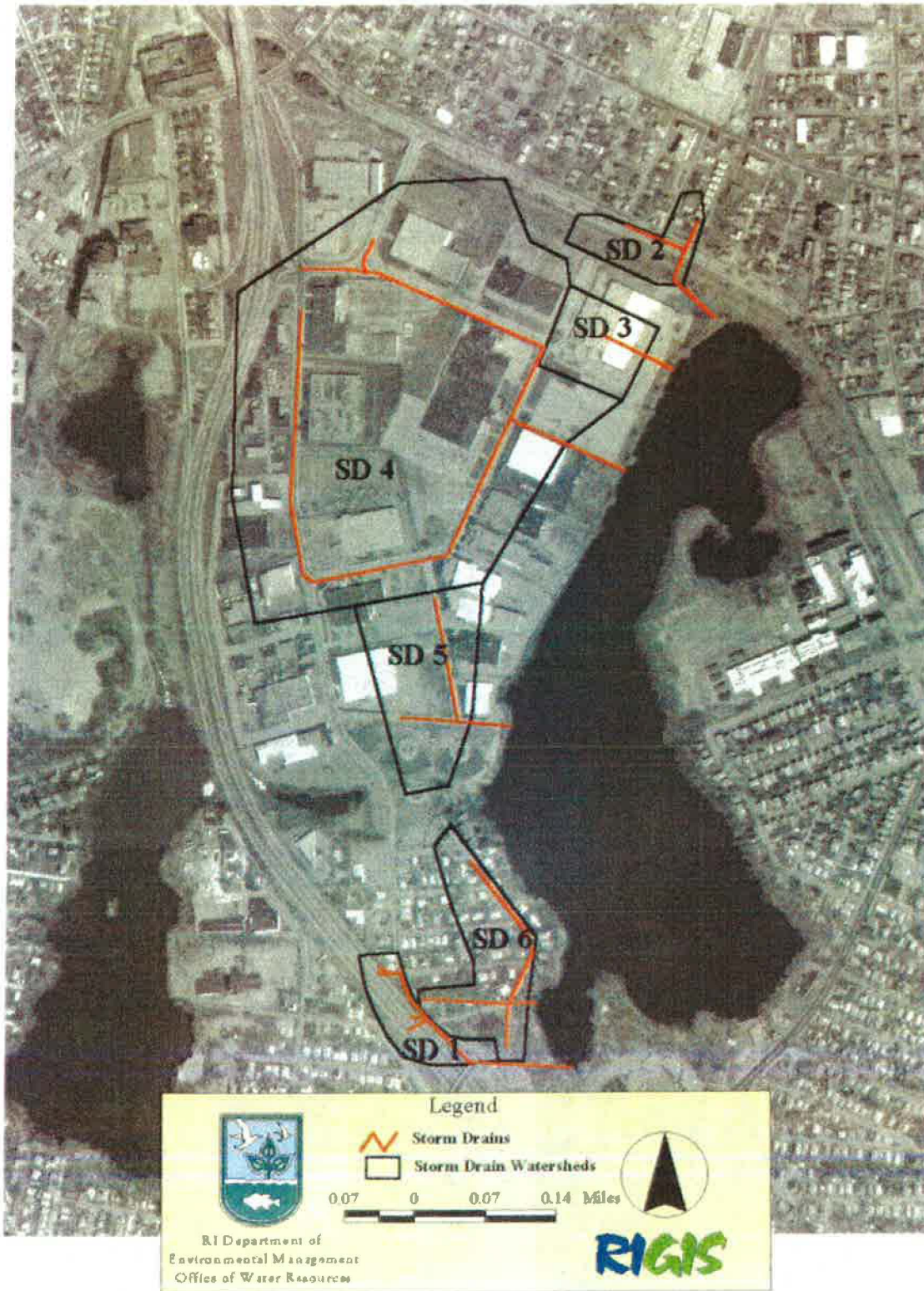


BMP Watershed

WATERSHED SCALE 1" = 200'
 0 200 400
 0 50 100
 BMP SCALE 1" = 50'

WV WaterVision, LLC
 481 GREAT ROAD, SUITE 3
 ACTON, MA 01720

 **COMPREHENSIVE ENVIRONMENTAL, INC.**
 21 DEPOT STREET
 MERRIMACK, NH 03054



Mashapaug Pond Storm Drains and their Drainage Areas

Image from Rhode Island Department of Environmental Management

Some facts to take home...

Pawtuxet River Watershed

- A watershed is a land area that supplies water to a river system; all water in a river system drains into a main river
- The Pawtuxet River Watershed is the largest in the State
- It connects 64 ponds and 93 brooks
- Includes all or parts of: Coventry, Cranston, East Greenwich, Exeter, Foster, Glocester, Johnston, Providence, Scituate, Warwick, West Greenwich, and West Warwick.
- Leads to the Narragansett Bay
- Tongue Pond feeds Spectacle Pond which feeds Mashapaug Pond which feeds Roger Williams Park Ponds

Surface Water Runoff

- Surface water from precipitation, snowmelt and overwatering or lawns flows into storm drains or directly into water bodies.
- The water runoff carries pollutants, like lawn care chemicals, paints, solvents, used motor oil and other auto fluids, animal waste, and industrial pollutants, into the water supply.
- Surface water runoff is the largest source of pollutants, including chemicals, metals, bacteria, and nutrients that promote growth of toxic algae, in many of the State's ponds, brooks, and streams.

Gorham Manufacturing

- Industry also has contributed to the pollution in Mashapaug Pond
- Gorham Manufacturing operated for almost 100 years along the eastern edge of Mashapaug Pond
- Gorham was the largest silver manufacturer in the world during the 19th and 20th centuries, producing a wide variety of fine silver products in 30 buildings on the site
- Gorham was purchased by Textron in 1967 and closed its doors in 1986
- The buildings were demolished by 2001, leaving behind extensive contamination in the soils and groundwater on the 37-acre site and in the water and sediments in Mashapaug Cove, the adjacent section of Mashapaug Pond.
- Pollutants on the site include metals, solvents and combustion waste products.
- Portions of the site have been cleaned or capped, but many issues remain.
- The site is now owned by the City of Providence, but Textron also has responsibility for the cleanup.
- A Stop & Shop and 3 smaller retail stores opened on the site in 2002. The Stop & Shop closed in 2006.
- Alvarez High School opened on the site in 2007. The ground around the school is covered with clean soil and asphalt to prevent contact

with pollutants and a ventilation system was installed to prevent pollutants from contaminating the air in the school.

- The Cove and the adjacent area next to the school have not yet been cleaned or capped, so the public is not allowed access to those areas

What Does This Mean to Us?

- Due to surface water runoff and industrial discharges, Mashapaug Pond's water and sediments (the soil at the bottom of the pond) are contaminated with a variety of toxins.
- The runoff causes the growth of bluegreen algae, which produce toxins and make the Pond unsafe for swimming or drinking.
- Fish in the Pond are contaminated with industrial pollutants, including dioxins and PCBs. These pollutants become more and more concentrated when bigger fish eat smaller fish. People, who are at the top of the food chain, should not eat fish caught in the Pond or in other area urban ponds because of those highly concentrated toxins
- Bacteria levels are also high in the Pond after storms, since a large amount of runoff occurs at those times.
- Based on a neighborhood assessment conducted by the RI Department of Health and community partners, 95% residents in South Providence do not have easy access to public recreation facilities. Only 2% land use in South Providence is for parks/sport facilities/playgrounds and only 4% is designated as green space.
- Mashapaug Pond is beautiful and could be a great asset to our city's residents. But this will not happen until the Cove and surrounding area is cleaned and steps are taken to limit runoff contamination.
- Encourage the City of Providence to make the restoration of our urban ponds a priority!
- And do your part to stop pollutants from running off into the Pond!
 - Dispose of waste, including waste oil, properly
 - Pick up after your animals
 - Limit your use of fertilizer and other lawn products
 - Don't overwater your lawn