

Review

Why pay attention to brownfields?

Brownfields are...

... abandoned or under-used industrial and commercial lands that might be contaminated. Auto repair shops, gas stations, factories, warehouses, dry cleaners, and railroad facilities are all brownfields.

Redevelopment of brownfields...

- Reduces Sprawl

Sprawl is the movement of people from the city to the suburbs. This movement has hurt existing communities. The redevelopment of brownfields keeps neighborhoods from moving outwards onto undeveloped land.

- Provides Easy Access

Since many brownfields were sites where major industries were placed, they are often close to highways and airports.

- Reduces Ugly Properties

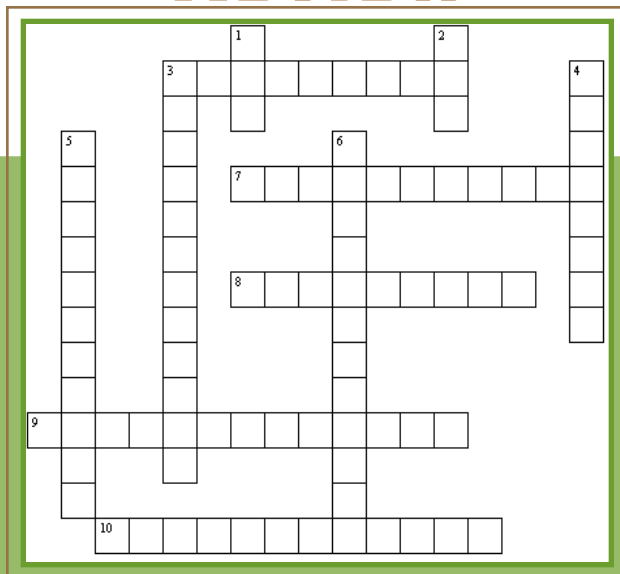
Brownfields are often neglected, making them ugly. Redeveloping the site can make it more attractive.

- Creates a Place for Business & Recreation

Common uses for redeveloped brownfields are office space, shopping and entertainment centers, and recreational parks that people can enjoy.

- Creates Cleaner Land in the Process

Developers are required to clean up brownfields during the development of the land.



ACROSS

DOWN

3 This program was established to identify the nation's most severely contaminated sites.

7 This Act required the EPA to establish air quality standards.

8 This was the first Superfund site.

9 This Act regulated water quality standards in the United States.

10 The president who established the EPA.

1 The acronym for a group formed to establish and enforce environmental protection standards.

2 An insecticide used in the mid-1900s to control insect outbreaks.

3 The book that increased awareness of the environment.

4 A day celebrated yearly to promote the awareness of environmental issues.

5 Sites of abandoned land that may be (moderately) contaminated.

6 The author of a major environmental book, and mother of the modern environmental movement.



A



B



C

What is a Brownfield?

Are any of these brownfields?



D



E



F



G



H



I

Grades 5-8

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A Young Environmentalist's Guide

ANSWERS TO FRONT PAGE "WHAT IS A BROWNFIELD"
A - 1 (all of them)
ANSWERS TO CROSSWORD PUZZLE
ACROSS: 3. Superfund / 7. Clean Air Act / 8. Love Canal / 9. Clean Water Act / 10. Richard Nixon
DOWN: 1. DDT / 2. DDT / 3. Silent Spring / 4. Earth Day / 5. Brownfields / 6. Rachel Carson

The 1960s were a dynamic period for ecology in the United States.

An insecticide, **DDT**, hit the market and was popular for the control of diseases such as typhus and malaria. Its persistence later became the basis for public concern over possible hazards involved in the pesticide's use. **Rachel Carson's** book ***Silent Spring*** in 1962 warned of its possible negative effects. Carson's alert made the nation much more aware of environmental issues.

In 1970, April 22 was established nationally as **Earth Day**. Twenty million demonstrators and thousands of schools and local communities participated in the initial event.

The president in 1970, **Richard Nixon**, created the **Environmental Protection Agency** (EPA) to establish and enforce environmental protection standards, conduct environmental research, and provide assistance to others combating environmental pollution.

The EPA was also responsible for amending the **Clean Air Act** in 1977, which brought dramatic changes to the federal air quality program. The Act required the EPA to establish national air quality standards as well as national standards for significant new pollution sources and for all facilities emitting hazardous substances.

The EPA also enacted the **Clean Water Act** that same year, which gave the EPA authority to implement wastewater standards and water quality standards for all contaminants. It also funded the construction of sewage treatment plants.

In the mid 1970s, there came strange reports from a small Niagara Falls town called **Love Canal**. Children and dogs were developing skin irritation after spending time in the field around their school, and rocks were exploding when dropped.

It was discovered that their elementary school was built on a dumping site and rest of the town was built on buried toxic chemicals. Love Canal's landmark case made it clear that a program was needed to fund the clean up of this and similar sites.

The **Superfund** program was established to identify those severely contaminated sites. Once identified, the sites are placed on a **National Priority List** (NPL) which determines when they will receive further investigation and long-term clean-up actions. Hundreds of sites have already been removed from the NPL list, but there are still lesser contaminated areas called brownfields.

Brownfields are usually sites where former businesses - such as auto repair shops, gas stations, factories, warehouses, dry cleaners and railroad facilities - were abandoned and the land has been left idle. The term 'brownfields' first came to use in 1992.

Brownfields have become large shopping malls, housing developments, office space, research facilities, and parks.

The possibilities are endless!

THE EARTH ON THE BIG SCREEN

Erin Brockovich

(2000)

Starring: Julia Roberts

A barely qualified clerk in a law office uncovers evidence that a large electric utility has poisoned the water supply of Hinkley, CA with toxic chromium, causing disease & death among many locals. Erin Brockovich's efforts to find facts & push through a major lawsuit were central to the ultimate \$333 million award.

Based on a true story.

The Day After Tomorrow

(2004)

Starring: Dennis Quaid, Jake Gyllenhaal, Emmy Rossum

Take a look at the world if the greenhouse effect & global warming continued at catastrophic levels. A paleoclimatologist (a scientist who studies the ways weather patterns changed in the past), tries to save the world while also trying to get to his son as the city witnesses the beginnings of the new Ice Age.

DISCLAIMER: This movie may not be scientifically accurate.

A Civil Action

(1998)

Starring: John Travolta, Robert Duvall

Is contaminated water responsible for deaths and sickness in a suburban New England town? Can it be proved in court? Based on a true story, this movie relates the efforts of an attorney to bring an industrial polluter to justice.