HEALING THE LAND'S CHEMICAL WOUNDS:

This is a happy tale of two cities. One takes place in Denver, the heart of the wide-open West. The other takes place in Hartford, the heart of the settled, Yankee East. In both versions, chemically tainted patches of land called brownfields rise from the ashes of military or industrial pollution.

Consider the Adriaen's Landing project, the sometimes-controversial centerpiece of Hartford's downtown revitalization. Today, it rises as an impressive mound of glass and steel, located between the cement and stone of the old downtown and the greensward along the bank of the Connecticut River. Within a few years, a convention center, hotel, science center, shops and pedestrian walkways will be laced with flowers, trees and other landscape plantings. Urban gold.

All this emerged from what was once an industrial eyesore, an urban brownfield so polluted that when I worked there a few years ago, our crew needed medical protection. We were drilling for soil samples in order to reconstruct the natural history of the floodplain before it was covered over. It was a touch-and-go process, complete with rubber gloves and overseers who wouldn't let us touch a sample until it had been sniffed with a gas chromatograph -- an electronic nose -- to make sure it didn't contain toxic hydrocarbons like benzene, polychlorinated biphenyls (PCBs) or worse. Beneath our drill sites were patches of soil contaminated by coal-tar wastes and pools of hydrocarbons floating on the water table. Most of this has since been cleaned up or contained.

The contaminated soil beneath Hartford was pure as mountain snow compared to the bonanza of lethal toxicity beneath the former Rocky Mountain Arsenal, which lies only 8 miles northeast of Denver. During World War II, the arsenal was a federal weapons factory for chemicals of mass destruction, notably sarin nerve gas and mustard gas, a skin-blasting agent called lewisite, and the incendiary materials napalm and white phosphorous. After World War II, the site was leased to what became a Shell Oil subsidiary that manufactured a host of pesticides and herbicides. During the early Cold War of the 1950s, the Rocky Mountain Arsenal became a secret chemical weapons factory before it was finally abandoned. So nasty was this place that bombs of sarin -- a substance used by Saddam Hussein against Kurds in northern Iraq -- were discovered during the environmental cleanup. Alleged to have contained the most polluted square mile in the United States, the former Rocky Mountain Arsenal is a national Superfund site whose cleanup costs will surely rise above the projected $3.2 billion.

Administratively, the former Rocky Mountain Arsenal was converted from a chemical weapons factory managed by the U.S. Army into one of 542 National Wildlife Refuges managed by the U.S. Fish and Wildlife Service. In May of last year, 5,000 acres of prairie grassland, artificial savannah and small lakes were officially opened to the public with great fanfare. Eventually, 17,000 acres will be available to visitors, nearly a million of whom have come already. Only the most contaminated portions of the site will remain permanently off-limits to the public.

The best news is ecological. Even before the administrative change, the landscape was being naturally converted from toxic wasteland to productive ecosystem. When the first federal biologists moved in to examine the area in 1986, they were surprised at the abundance of wildlife, especially the thriving population of bald eagles. They, along with white pelicans, deer and prairie dogs, are favorites for wildlife viewing by visitors. To ensure public safety and to speed the ecological recovery, there is now an extensive environmental monitoring program that regularly tests the wildlife, plants, soil, groundwater and lakes. Except for the protests of a few environmental activists, the recovery is going well.
Two centuries ago, the notion of reclaimed land usually referred to taking land physically back from the sea with dikes and ditches. Today, reclaimed lands are usually former brownfields being taken back from our own blundering chemical onslaughts of the past. In this happy tale of two cities, suburban Denver is getting its largest natural wildlife refuge. Urban Hartford is getting a crown jewel.

Out of ruin, riches.