

Brownfield Redevelopment, Another Source Water Protection Tool

For me, “Brownfield” is a term that invokes a somewhat sad, melancholy feeling of lost optimism. I’ve always lived where fields of wheat, corn, and milo dominate most of the landscape. I’ll never say that a field of any of these crops is colored brown, even at the time of harvest. While the expression may have been wordsmithed to describe properties in the Rustbelt that had commercial and industrial potential to be green again (read profitable, not specifically environmental), residents of the Wheatbelt probably haven’t translated this well.

The Environmental Protection Agency (EPA) has a definition of a brownfield, as established by the Brownfields Revitalization Act of 2002. Paraphrased, it says that a brownfield site is a real property, complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant, which hinders the expansion, redevelopment, or reuse of the property. Specifically, these properties can be the old dry-cleaning shop downtown, the lead smelter site just outside of town, the abandoned railroad right-of-way that doesn’t seem to need much mowing many years after the tracks were pulled up, the old school or hospital that probably had some asbestos insulation or the vacant lot where a service station once existed until the owner retired and the convenience store opened across the street. Properties already under enforcement actions are typically not considered to be brownfields.

In the future, stronger efforts to educate and assist water-minded persons will occur, to explain the importance of this program to protect source water.

The purpose of having a definition and a process to convert brownfields is conservation on a community scale. Instead of throwing away these previously used locations and developing new sites which often take productive agricultural land, programs are available to reuse brownfield sites. The goal is to make them productive properties again

instead of making additional potential brownfields.

As with water, wastewater and other federally regulated concerns, the Kansas Department of Health and Environment (KDHE) has a program to operate the EPA Brownfield Program in our state. Staff that manage the program are located in KDHE’s Bureau of Environmental Remediation - State Response and Property Redevelopment Unit. They actively educate and assist cities, counties and other sponsors on how to reuse Kansas-style brownfields. This education has been focused toward cities and their economic development and planning department staff. In the future, stronger efforts to educate and assist water-minded persons will occur, to explain the importance of this program to protect source water.

Also available to provide assistance is the Kansas State University Center for Hazardous Substance Research (CHSR). CHSR has an outreach program which is designed to disseminate the results of their research to the people of Kansas. One of these outreach programs is Technical Assistance to Brownfield Communities (TAB). TAB is a nationwide program of the EPA. K-State’s CHSR is one of



Is this a brownfield property? It could be. This lawn and garden equipment store and small engine repair shop closed months ago. The fuel and waste oil tanks probably provide enough evidence to have a Phase II environmental review conducted before completing any transactions.

only four entities contracted to provide assistance to communities with brownfield management and redevelopment. This assistance, from start-to-finish, is provided at no cost to communities. The program is authorized to provide their service not only in Kansas but in the rest of EPA's Region 7 (Missouri, Iowa and Nebraska) and also in Region 5 which includes those more highly industrialized states of Minnesota, Wisconsin, Illinois, Indiana, Michigan and Ohio! The TAB staff provides assistance with EPA applications, they'll serve as a liaison between the local community and the regulatory agencies, they'll assist with finding alternative funding sources and host community meetings to explain the value of converting brownfield sites into productive properties. "Visioning" sessions are also moderated to engage community ideas and support.

There are some significant brownfield conversion projects that have been accomplished in our region. One of the largest was the Missouri River riverfront in Omaha, Nebraska. This site was an area of warehouses, railyards, a lead smelter, a scrap metal facility, etc., and had more than 100 years of history before a different vision for the area was accepted. Freedom Park is now promoted as a destination, a gathering place for people of the region for 4th of July celebrations and other weekend and holiday events.

In Kansas, the city of Atchison has also rehabilitated their connection to the Missouri River. What once was their only real economic and transportation connection to the civilized world, is now Riverfront Park. The steamboat docks have collapsed and have been carried away years ago by the Big



Professionally designed signs have been installed to direct De Soto visitors to government offices, retail sites, schools and parks.

Muddy, and the area became less important (and less usable) when new transportation corridors were established. Seeing the potential and the opportunity, the former brownfield is now a park, built to help celebrate the bicentennial of the Lewis and Clark Expedition. It also boasts a Veteran's Memorial Plaza, an improved boat ramp, and a hiking and biking trail along the river.

The city of De Soto does not have as rich a pioneer history as the two previously mentioned communities. But the early community did have a tie to the Kansas River as a steam-powered saw mill and a ferry were located there. De Soto was primarily known as a great place to grow sweet corn, watermelons and other fresh produce for the people of the

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Kansas City area. The floodplain adjacent to town has excellent soil for truck gardens, which still exist. City founders probably recognized the risk of building on the floodplain and the town was built on the hill on the opposite side of the railroad tracks. One of the city's wellfields is also located here, and as an undeveloped area with relatively easy access, it had been used as a dumping site, a not so uncommon practice that happened in many places. In the 1990's, a sand company built a facility on the riverbank to dredge sand from the riverbed, to sort the various sizes of sand and gravel, and to transfer the commodities to trucks. The sand company's dredging permit was cancelled by the Corps of Engineers in 2003, and the sand plant site was abandoned, leaving behind fine sand on the flood plain soil and concrete foundations of the washing and loading equipment. It was unknown if anything else like fuels, solvents, etc., were present in the soil. The rest of this story will continue later in this article.

Many old commercial and industrial sites qualify as brownfield sites because of a perceived possibility of environmental contamination. Because contamination can remain in the soil or groundwater, ownership transfers of property can carry assumption of the responsibility for



The author dips the front wheel of his bicycle in the flooding Missouri River at Atchison's Riverfront Park, a former brownfield, at the conclusion of the 2008 Biking Across Kansas . His ride started 8 days earlier on U.S. Highway 36 at the Colorado state-line west of Saint Francis.

remediation of the contamination. The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) allows purchasers of property to avoid environmental liability if they take appropriate efforts to determine that no environmental issues existed with the property before it was purchased.

A Phase I Environmental Review is the first step in determining if there are real issues with the property. A Phase I Review is a thorough search for written documentation of the history of the property in question, typically going back to at least 1940. This review can include a search of the ownership records at the county Register of Deeds, fire insurance maps, telephone books, etc. A Phase I Review also includes a simple walk-through visual inspection to obtain any obvious clues at the property or those in the immediate neighborhood. When it is possible,

persons that have first-hand knowledge of the past use of the property will be interviewed. If the person conducting the Phase I Review learns of any information that suggests that contamination could be present, his or her report will recommend that a Phase II Review be conducted and the methods to determine the presence of the potential contaminants. Phase II Reviews often include collecting samples of soil, groundwater, paint and materials known to potentially contain asbestos. Funding is available from KDHE to pay for these reviews, and there are companies in Kansas which can do the reviews to KDHE's satisfaction.

While most brownfield sites that have been converted in Kansas have had the primary goal of achieving economic development, the program can have more benefits than that. As mentioned earlier, another goal that can be achieved is source water protection. Participation is not limited to cities and counties either; it is open to other quasi-governmental agencies, like rural water districts. When a public water system well is in the vicinity of a brownfield site – an abandoned property with possible environmental concerns and potentially no responsible party – it may be in the best interest of the water system to find an agency (if not themselves) to assume responsibility for the property. If contamination is found, it can be taken care of and prevented from impacting the water supply in the future. If no

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The Festival Grounds of the De Soto Riverfest Park have wide, parallel sidewalks to allow easy access to food and craft vendors. These vendors have easy access to electricity which is available from the above-ground access boxes. The tower in the foreground is a relic of the past sand dredging activity on the site. It was included in the park development plans as a possible future water feature.

This view of the Festival Grounds is from the concrete foundations left behind by the sand company. The park design for the area in the foreground calls for a shelter with showers and restrooms, and recreational vehicle camping stalls on the opposite side of the circular drive.



The De Soto boat ramp will serve recreational users of the Kansas River and allow better access to the river for public safety personnel.

contamination is found, controls can be built into the redevelopment plan that prevents the property from being used again in a potentially hazardous manner.

While source water protection was not the primary goal of the city of De Soto, their effort to put in a boat ramp to the Kansas River and to build Riverfest Park did achieve some source water protection benefits. The Phase I Review for the sand plant portion of the property determined that no further testing was necessary. Phase I and II Reviews were conducted for the area where dumping had occurred and no significant environmental issues were found. The city was able to move forward with the boat ramp and park project

without any environmental remediation concerns. Because the park has an amphitheater, picnic grounds and a boat ramp to the Kansas River, many more sets of eyes, including those of city employees, now watch over the wellfield on a daily basis. In the past, there were very few people in the area, and many of those may have had ulterior motives. Dumping has been virtually eliminated now. As the remaining phases of park development are constructed, like a recreational vehicle park, sports fields, shelters, trails, etc., more protection will be achieved. Riverfest Park has already hosted a number of concerts and was opened in October of 2008 with a barbeque competition, “Kookin’ on the Kaw.”

If your water system uses source water which is in close proximity to brownfield sites, take a look at the Brownfield Program. Adoption of a source water protection plan which identifies this program to address possible contamination threats may be very helpful in keeping water system costs manageable and the water delivered to your customers safe and affordable.

Important links for more information:

KDHE Brownfield Program:

www.kdheks.gov/brownfields/index.html

EPA Brownfield Program:

www.epa.gov/brownfields/

KSU CHSR-TAB:

www.engg.ksu.edu/chsr/outreach/tab/

City of De Soto Riverfest Park:

www.desotoks.us/PDF%20Files/Rfparkconcept.pdf

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