

THE COLORADO BROWNFIELDS HANDBOOK

A LOCAL GOVERNMENT GUIDE TO SITE REUSE AND ECONOMIC REDEVELOPMENT



Colorado Department
of Public Health
and Environment



Colorado

Office of Economic
Development and
International
Trade



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*A LOCAL GOVERNMENT GUIDE
TO SITE REUSE AND ECONOMIC
REDEVELOPMENT*

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Cover photograph: The 5S Gas Station in Rangely, Colorado. (Photo courtesy of Colorado Brownfields Foundation)

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I. Introduction

In communities throughout Colorado, the presence of potentially contaminated properties, often referred to as brownfields, creates serious challenges for local elected officials. Brownfields detract from main street vitality, hinder economic development efforts and may pose threats to both public health and environmental quality. Cleanup and redevelopment of these properties can be costly and time-consuming, and is often undermined by issues such as contested ownership/responsibility, liability concerns and questionable redevelopment potential.

What is a brownfield?

A brownfield is any real property that is abandoned, idled or underutilized due to the presence or potential presence of a hazardous substance, pollutant or contaminant.

A significant portion of these sites have been put back into productive use and are now generating higher tax revenues and providing jobs and housing. Despite the program's success, there are likely still thousands of brownfields around the state awaiting redevelopment.

The Colorado Department of Public Health and Environment (CDPHE) established the Voluntary Cleanup Program (VCUP) in 1994 to assist communities and private parties in facilitating the redevelopment of contaminated properties throughout Colorado. Since its inception, over 400 sites have come through the program.

In 2002, CDPHE entered into a partnership with the Office of Smart Growth in the Colorado Department of Local Affairs to build on the success of the Voluntary Cleanup Program by studying local community efforts at redevelopment of parcels impacted by real or perceived contamination. A number of other key state agencies and groups were enlisted to provide a perspective on local government economic development efforts and environmental remediation around the state.

Pilot brownfield projects were selected in Alamosa and Rangely. The agency partners worked with these communities to leverage resources and develop model approaches incorporating existing redevelopment tools. Additionally, the partners analyzed and documented roles and interrelationships of various levels of government as they worked to implement the redevelopment process, with the goal of identifying potential institutional obstacles to brownfield reuse.

Colorado's Voluntary Cleanup Program (VCUP)

A brownfields program administered by the Colorado Department of Public Health and Environment (CDPHE) to provide a means by which sites not under any other authority are cleaned up to a usable condition. The program approves cleanup plans and/or provides letters of "No Further Action," signifying site closure.

The Colorado Brownfields Handbook is the end result of this three-year project. This manual incorporates lessons learned from the two pilot projects and provides a step-by-step process for brownfield cleanup and redevelopment. It also includes information on topics like environmental insurance, risk management and reuse scenarios, as well as a comprehensive listing of the technical and financial resources available to local governments.

Brownfield redevelopment exists at the intersection of land use, public health and economic development. In isolation, practitioners of these individual disciplines are ill-suited and often ineffective at bringing about the redevelopment of brownfield parcels. By pooling the available local, state and federal resources, communities can effectively address the blight and economic malaise that brownfields pose.

CDPHE performing a brownfield assessment at a closed refinery in Fruita, Colorado



II. Brownfields in Colorado: An Overview

The History of Colorado Brownfields

Natural resource industries such as mining and agriculture represent the historic economic base in Colorado. Rural communities connect with Colorado's urbanized areas along the Front Range via these economic links. Lumber mills, tanneries, ore crushers, and agricultural processors appeared in towns

Potential brownfield sites in Colorado include:

- *Gas stations/garages*
- *Dry cleaners*
- *Radiator shops*
- *Industrial sites*
- *Metal plating and fabrication*
- *Lumber operations and processing*
- *Mining operations and processing*
- *Power plants*
- *Agricultural processing facilities*

throughout the state, preparing goods for transportation to foundries and processors in larger, Front Range cities. Over time, manufacturing and fabrication, chemical handlers, automotive service, and other support businesses joined Colorado's growing business community. Many historic businesses operated without the benefit of a modern understanding of hazardous materials and environmental stewardship.

While the word "contamination" conjures up images of big cities and heavy industry, smaller sites impact urban, suburban and rural communities alike. Environmental impairments have been observed

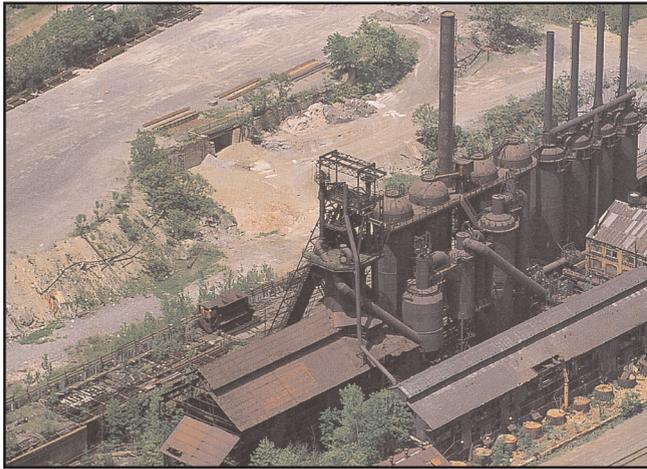
throughout Colorado's mountain and plains communities. In a small mountain community, waste solvents (usually associated with machine shops and dry cleaners) originating from a dumpsite were discovered in groundwater several years ago. Around the same time, a zinc processor was found to be generating pollution near a central mountain town. While there are sites of substantial size, almost 60 percent of the sites entering the State's Voluntary Cleanup Program are less than 10 acres in size, and 25 percent are less than one acre. These small sites are often centrally located in established commercial and industrial districts. The pilot sites selected in Rangely, for example, were gas stations along Main Street.

Even for otherwise economically viable sites, environmental issues can create the economic gap that impedes reuse. Businesses that may have operated long before many substances were known to be hazardous often carry such stigma. There is a possibility that solid and liquid materials, above ground or below ground, left over from earlier times may today be classified as hazardous. Materials now considered to be hazardous may have inadvertently been released during the course of everyday business. Legal liabilities and property value impairments may be caused by hazardous materials on adjacent sites, thereby causing a regional impairment. Environmental laws may leave property owners responsible simply because they own the site being impacted, or had owned the site in the past.

FREQUENTLY ASKED QUESTIONS

Development patterns in Colorado sometimes necessitate changes in land use. Early in Denver's history, industrial and railroad operations were located along the South Platte River to access water and discharge wastes. Riverbanks were usually filled with landfill debris. Over time, residences have developed near the river and newer industrial operations have located elsewhere. As a result, it is not uncommon to see aging industrial uses adjacent to residential neighborhoods.

In many communities riverways are also being recognized for their historical and recreational significance. The Historic Arkansas Riverwalk Project in Pueblo is a good example. The city completed an excavation and redevelopment of the former Arkansas River channel – which had been filled and relocated following a flood. The redeveloped site is now an economic anchor and has been key to the revitalization of downtown Pueblo.



Aren't brownfields the site of heavy industry and large manufacturing plants?

While there are brownfield sites of substantial size (the locations of Denver's Pepsi Center and the Pueblo Convention Center, for example) many of Colorado's affected sites are smaller scale and located in commercial and industrial districts.

Why should my community be concerned?

A property impaired by real or perceived hazardous waste may be difficult to put to a higher and better use, can reduce the value of neighboring properties, may hinder community and economic development efforts and impact drinking water quality.

How is a site designated as a brownfield?

Generally speaking, there is no formal "designation process" for brownfields, nor are there criteria that have to be met. A brownfield site may be privately or publicly held and doesn't need a designation in order to be impaired. It is simply any property where reuse, expansion or redevelopment is hindered by real or perceived contamination.



What is the difference between a brownfield and a Superfund site?

A Superfund site is one that has been identified and formally designated by the Environmental Protection Agency (EPA) as posing an imminent and substantial threat to the public health and environment. These sites are placed on the EPA's National Priority List (NPL) for cleanup under the Superfund program. Brownfield sites may or may not have contamination present, and health threats may exist. However, the vast majority of brownfield

sites will never qualify for the NPL. Examples of NPL sites in Colorado include the Rocky Mountain Arsenal and the Summitville Mine site.

Is the property going to be marketable?

The marketability of any particular site after environmental closure will depend on that site's viability for reuse. A major brownfields objective is to remove the environmental stigma so market forces will not be impeded.

What will it cost to clean up?

The overall cost of any project is affected by many variables, such as the size of the site, the volume of wastes, the concentrations of contaminants, the future use of the site, and the cleanup methods selected. Ongoing monitoring and reporting may be necessary on a site-by-site basis and will depend on the remedy implemented at a site. However, an approved cleanup plan can help identify and quantify costs for a public or private entity's decision-making process. In many instances, redevelopment can proceed simultaneously with implementation of the cleanup plan, thereby enabling cash flow.

General observations about Colorado brownfields

- A majority of Colorado sites are less than ten acres in size
- Perceptions present a hurdle to reuse; the cleanup is often perceived to be more onerous than in reality
- Property owners may ignore, neglect or abandon properties because of liability fears
- Brownfield properties create external impacts by diminishing surrounding property values
- Public and private sector education, technical and/or financial assistance may be needed to bridge economic gaps hindering community revitalization

What about the liability concerns?

Liability issues can arise from state and federal environmental laws or from private parties. However, liability relief can be provided by the state VCUP and federal "all appropriate inquiry" guidelines. The likelihood of a successful lawsuit arising after completion of a state-approved cleanup is remote. There are also a number of private environmental insurance products currently available to address liability concerns.

How can a community proactively facilitate brownfields revitalization?

Proactive facilitation can involve providing outreach/education for businesses and property owners, identifying redevelopment sites, establishing a funding program (or identifying funding resources) and possibly taking interim or ultimate ownership of a property. Local efforts may specifically target environmental issues such as funding environmental site work, or may generally enhance project feasibility through development incentives or creative financing. Community leaders can identify and support the efforts of local brownfield "champions." Facilitating site reuse can create jobs, increase public revenues, and enhance livability.

III. Community Benefits of Brownfield Redevelopment

Economic Benefits

An aging automobile service station becomes a successful restaurant in a small mountain town. A long vacant industrial piping shop, originally constructed on the northern Front Range to support an earlier oil boom economy is rebuilt as a multi-tenant, light industrial facility and home to small-businesses and start-ups. A defunct mushroom farm in the northern suburbs of Denver, contaminated with DDT, is cleaned up, allowing infill housing development and park space. Each of these sites faced the market perception that previous uses had left lingering environmental problems. And each illustrates how creative engineering solutions and evolving environmental policies and programs have created new jobs and housing, increased tax revenues, and furthered community development efforts. Understanding fiscal and economic impacts can be very useful in evaluating the appropriateness for a community to financially assist in brownfield redevelopment.

An Emerging Brownfields Marketplace

Until recently, contaminated properties had no place in an investment portfolio and were purposefully avoided. Similarly, buyers shied away from potentially

problematic real estate, even when the location was well suited to their business. Many small suspect sites were simply abandoned by owners not willing to face environmental liabilities. Although actual pollution on a property may be minimal, on-site contamination, nearby contamination or just the perception of contamination negatively impacts marketability. A more favorable regulatory and cost-effective technological climate is creating an emerging market for investors, businesses, and public uses.

There are now specialized investment companies that purchase and clean up sites, and subsequently return these sites to the mainstream real estate market. The fact that these entrepreneurial investors seek large, heavily contaminated sites creates a good fit for many properties that fit the image of a large, industrial-era property.

It is recognized that many communities, however, are impacted by smaller and poorly located sites that lack the deal economics that attract these institutional brownfield investors. It may be necessary for the community to step in and leverage grant funds and other resources to improve deal economics. Understanding the dynamics of this market is necessary to leverage opportunities and transform idled automotive, dry cleaning, metal fabrication, and other similar uses into community assets.

Colorado examples of the benefits of cleaning up brownfield sites are many and diverse. A non-profit

association receives a donation of a mining contaminated site and cleans it up using grant monies to create a county fairground complex. The Town of Rangely, by taking title to abandoned gas stations and cleaning them up, saw immediate improvements to adjacent properties and increased tax revenue. A first tier suburb of Denver acquired a former landfill and using Revolving Loan Funds cleans up the site by placing a ballfield on top of the now capped landfill. These are just a few examples of municipalities or non-profits that have made redevelopment of brownfields a priority for the future of their communities.

Market Realities

Market economics is a major consideration in recycling sites. Often there can be a gap between the economic feasibility of completing the redevelopment project and the value of the repaired parcel. A sufficient rate of return is necessary to make a property transaction viable. Changes in market conditions can provide the impetus to redevelop. For example, the legalization of gambling in Central City and Black Hawk generated casino development despite a century of contamination from nearby mining operations. For properties with obvious potential, redevelopment will likely proceed with little prompting. However, renovation costs, environmental costs, and high-risk reserves held by investors all serve to widen the feasibility gap.

Smaller sites often do not intrinsically have the



Uptown Bistro Restaurant, Frisco, Colorado

advantage of a well-financed, motivated seller who can sell at a discount. Many small site buyers are only interested in buying clean properties to operate their businesses, rather than being in the cleanup business. Renovation of the Uptown Bistro Restaurant in Frisco, Colorado, was almost scuttled when contamination was discovered on site. Cleanup was eventually performed by the seller, the deal closed, and the redevelopment now generates economic impacts estimated to exceed \$360,000 annually in tax revenues and wages. Although reuse may be a priority for the community, a privately held site may remain vacant or underused if environmental remediation is not undertaken prior to the transaction.

Even for economically viable sites, environmental issues can create liability and financing gaps that can impede reuse. A string of potential developers passed on the Timberline Star Industrial Park redevelopment site in Fort Collins because of poten-

tial environmental liabilities. The sellers eventually eliminated this liability by cleaning up the site under Colorado's Voluntary Cleanup Program. This enabled the sale and reuse of the site as a successful small business park and now provides economic impacts from tax revenues and wages exceeding \$800,000 annually.

Many Main Street brownfield sites are of relatively small dimensions. Small site dimensions mean that contaminants can quickly disperse across multiple property lines. It may be difficult to gain cooperative access to all sites necessary for environmental sampling and cleanup activities. Responsible parties are often difficult to identify and non-cooperative property owners can hinder reuse plans. Such environmental issues make site assemblage for larger format uses that much more difficult.

Lenders apply great caution when lending on environmentally troubled properties. The risk to collateral value and liquidity can restrict capital availability. Because of liability concerns, bankers and other lenders are likely to require an environmental investigation as part of the buyer's due diligence process. Lenders are concerned not only over the potential impacts on the marketability of real estate collateral, but unexpected environmental situations may interrupt business operations and the borrower's ability to repay a loan. While environmental conditions on their own may not stop financing, critical questions must be addressed.

Is taking a stigmatized property to market, or enabling a prospect to buy such a site, a simple matter? Yes and no. Environmental pollutants are not to be feared, ignored, or run away from; they merely need to be addressed. Simply educating public officials and staff, as well as buyers and sellers, on regulatory and technical advances goes a long way in overcoming hurdles to reuse. When environmental issues do get complicated, there are various federal, state, and local programs to turn to for technical assistance.

Uptown Bistro - Frisco, Colorado

The popular Uptown Bistro Restaurant in Frisco, Colorado was the successful renovation of a tire service shop, which left behind waste oils and hydraulic fluid on a quarter-acre lot. The Bistro renovation eliminated an aging obsolete structure and replaced it with an aesthetically pleasing building, thereby upgrading the appearance of Main Street. In its new use, the site provides economic impacts estimated to exceed \$360,000 annually in tax revenues and wages, plus the \$420,000 one-time investment in redevelopment.

The Uptown Bistro site is an excellent example of the economic benefits that a municipality might realize in facilitating a brownfield redevelopment. Factoring in the increases in sales tax, property tax, new job creation, and capital expenditures can turn a formerly marginal site into an economic benefit to the community. The specifics of the economics are

UPTOWN BISTRO RESTAURANT

Frisco, Colorado

Annual Benefits

City Tax Revenues (property & sales)	\$23,000
County Tax Revenues (property & sales)	\$30,000
School District Tax Revenue (property)	\$4,000
Employee Wages/Payroll	<u>\$312,000</u>
ANNUAL DIRECT IMPACTS*	\$369,000

One-Time Impacts

New Investment – Construction	\$250,000
New Investment – Equipment	\$80,000
Environmental Service Costs	<u>\$90,000</u>
ONE-TIME DIRECT IMPACTS*	\$420,000

*From these sources (1997 dollars)

Total annual benefits represents a more than \$200,000 (215 percent) increase in wages and a \$43,000 (32 percent) increase in tax revenues attributable to redevelopment and reuse.



detailed in the text box at left. This site was transformed from a tire store into a popular restaurant. However the redevelopment almost did not happen when environmental contamination was discovered. Similarly, a municipality may utilize available resources to replace a dilapidated structure with an attractive addition to the downtown tax base.

Timberline Star Industrial Park, Fort Collins, Colorado

Similarly in Fort Collins, a “no further action” letter from the Colorado Voluntary Cleanup Program enabled a private-sector developer to turn a former tubular steel pipe finishing facility into the Timber-

line Star light industrial facility, currently home to 15 small start-up businesses. The 12.5-acre site had been vacant for at least ten years with numerous developers walking away from potential environmental concerns. This site was redeveloped from an idle, underused and deteriorating facility to an active small-business industrial park.

This site is a good example of a former industrial location that through the years had attracted interested buyers because of its excellent location in a growing part of Fort Collins. The path to getting this property back on the market was facilitated by approval of a cleanup plan by Colorado’s Voluntary Cleanup Program. The cleanup consisted of digging

TIMBERLINE STAR
Larimer County, CO

Annual Benefits

City Tax Revenues (property & sales)	\$13,000
School District Tax Revenue (property)	\$22,000
Employee Wages/Payroll	<u>\$750,000</u>
ANNUAL DIRECT IMPACTS*	\$785,000

One-Time Impacts

New Investment – Construction	\$515,000
New Investment – Equipment	\$135,000
Environmental Service Costs	<u>\$450,000</u>
ONE-TIME DIRECT IMPACTS*	\$1,100,000

*From these sources (1997 dollars)

Total annual benefits represent a \$35,000 (30 percent) increase in local tax revenues and a 100 percent increase in wages for jobs on-site.



up and removing contaminated soils, followed by monitoring of the ground water. The cleanup levels for industrial use did not require extensive remediation. The applicant then performed the cleanup, subsequently clearing the property for resale. The current usage of the site has resulted in a net increase of 30 new jobs for the community as well as an increase to the tax base.

Smart Growth Benefits

The issue of brownfield cleanup and redevelopment is a central tenet of Smart Growth. As Colorado's population continues to increase, it makes sense that growth be directed where supporting infrastructure already exists – in towns and cities. Through the use of infill development (that is, development within established areas) communities can direct new devel-

opment away from open space and agricultural lands, thereby protecting these landscapes and reducing sprawl. Oftentimes, the preservation of farms and open space is critical to a community's quality of life and the ability to attract and retain a qualified workforce.

These infill locations also provide a cost-effective alternative to edge development, since they reduce the cost of extending roads, infrastructure and public services (police, fire, etc.) into undeveloped areas. Infill sites are more pedestrian-friendly, more accessible by mass transit and usually lend themselves more readily to compact urban design and mixed use. Brownfield redevelopment also addresses the issue of community sustainability by replacing obsolete economic activities with modern uses that will ensure continued economic vitality.

Environmental Benefits

Beyond the local economic and smart growth benefits realized by doing brownfield cleanups, communities should factor in the benefits to the environment. Cleanup of ground water prevents contamination of drinking water sources. Cleanup of sites along rivers protects aquatic ecosystems from contaminant impacts. Completing a petroleum cleanup can improve indoor air quality on

neighboring properties by preventing gas fumes from seeping into adjacent structures. Overall, cleanup of abandoned sites removes or repairs buildings and prevents them from becoming “attractive nuisances,” benefiting the community as a whole. This was the case in Alamosa, where an abandoned power plant property had become a dangerous attraction for the homeless.



IV. A Roadmap for Brownfield Redevelopment

There are no hard and fast rules for redeveloping a brownfield site. No two sites are alike, and local conditions (economic, political, environmental, etc.) vary widely from community to community. Nevertheless, there are some general strategies and tips that have proven effective in many brownfield projects. For sites with petroleum contamination from leaking storage tank systems, the Division of Oil and Public Safety (OPS) should always be notified. The OPS has developed numerous guidance documents to assist with performing assessment and remediation activities. The methodologies offered here should be considered a template that local communities can work from and build upon.

The Role of Local Government in Brownfield Redevelopment

Local governments can facilitate one or all phases of the brownfields redevelopment process:

- Visioning - Recognize a community or economic need.
- Formulating Reuse Scenarios - Evaluate business opportunity, financial viability, economic impacts and environmental conditions for the reuse of a property.

- Transaction – Resolve risk management issues to facilitate property title transfer (if necessary).
- Implementing Redevelopment – Conduct environmental remediation, construction and renovation steps, and ultimately sell the property.

A Brownfields Cleanup Model For Local Governments

1. Community identifies needs and formulates reuse scenarios
2. Local government/non-profit acquires purchase agreement for property
3. CDPHE performs assessment (Phase I and II) of property and assists community in evaluation of sampling results
4. Local government makes decision on purchase of property and prepares VCUP application
5. Project site is enrolled in state VCUP
6. Access cleanup funds through federal/state brownfield grants, loan from Colorado Brownfield Revolving Loan Fund, etc.
7. Sell property for redevelopment and tax base enhancement

Given limited financial and staff resources, facilitation can range from passive to proactive. Passive programs may be as simple as recognizing an opportunity, fostering business or community interest, providing brownfields information and contacts, and accessing existing development incentive programs. Proactive involvement may entail outreach/education, targeting sites for redevelopment, establishing a formal brownfields funding program, and possibly taking interim or

ultimate ownership of a property. Brownfields programs may specifically target environmental issues (e.g., funding environmental site work) or enhance project feasibility (e.g., tax rebates). Specific problematic sites may be targeted, or there may be a broader focus on rejuvenating a particular neighborhood or commercial/industrial area. State and federal financial and technical support is available to seed local programs and is detailed in the next chapter of this handbook.



The Visioning Process

When approaching brownfield redevelopment, a community must first consider a number of broader social, economic and land use issues. Most communities in Colorado have a comprehensive or master plan detailing the long-range goals and vision for the community. These plans address the direction in which the community sees itself going, and will often include an action plan or implementation strategy for accomplishing community goals. Sometimes this vision is encompassed in other local plans (economic development, growth management, etc.) that may or may not be part of the larger comprehensive plan. Community goals might include addressing a workforce housing shortage, a desire for additional open space preservation or the creation of additional light industrial land to accommodate a growing economic sector. Viewed against the backdrop of the larger community vision, brownfield redevelopment can be seen as a step in achieving many of these long-range goals.

Formulating Reuse Scenarios

The formulation of a reuse assessment for a brownfield site involves an objective evaluation of opportunities, challenges and possible implementation strategies. A reuse assessment should consider the following:

- **Property Condition.** To evaluate physical condition, obsolescence, defects, deferred

maintenance, and items requiring capital investment. The assessment should include an analysis of the site, building structure, mechanical and electrical systems, safety issues (like fire protection), recommended building code compliance reviews, building interior and environmental conditions.

- **Community Impact.** To evaluate compatibility with community goals, planning and zoning, public safety issues, and value impacts on surrounding property values.
- **Context.** To evaluate relationship with surrounding properties, area vitality, and stakeholders.
- **Opportunity.** To identify economic assets, economic development opportunities, reuse scenarios, and resulting economic impacts.
- **Implementation Strategies.** To identify possible players, partnering opportunities, and funding mechanisms. This assessment should answer the following strategic questions:
 - ◆ Is the site useable or marketable as-is?
 - ◆ What needs to be done to make the site useable/marketable?

- ◆ Is there a public benefit from reuse?
- ◆ What are the hurdles to reuse?
- ◆ What strategies could be pursued to facilitate reuse?

It is entirely possible that an “immediate” reuse scenario for a brownfield cannot be identified. Some communities may arrive at the conclusion that the clearing and cleanup of a brownfield site is an “end-use” in and of itself. In these instances, positioning the site for future redevelopment can be seen as a critical first step in the community revitalization process.

Working with the State’s Voluntary Cleanup Program

While it is not required, communities are strongly encouraged to enroll their brownfield projects in the state Voluntary Cleanup Program (VCUP). The VCUP allows property owners, both public and private, to address real or perceived contamination based on the proposed reuse and position a property for reuse or sale. A “no further action” (NFA) letter, issued by the state health department when no further cleanup is deemed necessary for the planned use, is important in overcoming perception problems. If remediation is warranted, the VCUP can provide technical assistance and approve cost-effective, risk-based cleanup plans. An NFA letter

can be issued once the approved cleanup plan has been implemented and the site meets cleanup levels appropriate for the intended use (residential, industrial, commercial, etc.). Many buyers and lenders require an NFA letter for additional clarity on liability issues.

Additional Best Practices in Brownfield Redevelopment

In addition to the aforementioned redevelopment steps, a number of other local government initiatives have yielded “best practices” to accomplish a variety of community and economic goals. These practices include:

- **Education.** Educating property owners, developers, businesses, lenders, and city/county departments to overcome misperceptions and build support for local projects is critical. These stakeholders are often uninformed about brownfield solutions and fear potential liability and reduced property marketability after redevelopment. Conveying information about risk-based cleanup approaches, cost-effective engineering solutions, liability management options, and available funding programs is important in generating interest in brown fields redevelopment.

- **Integration of community priorities.**
Cleanup and reuse can address multiple community concerns, such as lack of space for business and housing, property maintenance and improvement issues, vandalism, public safety concerns and declining tax bases.
- **Coordination of intra-governmental relations.**
Because brownfields redevelopment is a land use and development activity, traditionally independent government departments may have a common interest in a project. These departments might include: economic development, planning, public works, environmental/solid waste, housing, public safety, engineering, transportation, health and human services, and legal. Use a team approach to explicitly involve appropriate departments.
- **Coordination of intergovernmental relations.**
It is also necessary to ensure communication and cooperation between city, county and state contacts for securing project approvals, funding assistance and closing regulatory environmental issues. Investors ascribe economic value to the regulatory benefits provided by voluntary cleanup programs and the most effective jurisdictions work closely with state and federal

environmental regulators. Assurances offered by Colorado's VCUP are often cited as a key factor in reducing uncertainty about regulatory outcomes, minimizing regulatory red tape, and addressing environmental hurdles.

- **Coordination of various stakeholder groups.**
Brownfields redevelopment can be public sector driven, private sector driven, or a combined effort depending on the project. As with other land development activity, identifying appropriate parties and managing relationships, including with the community, is essential to a successful project.
- **Provide an information clearinghouse.**
It may be necessary or desirable to engage the interest of businesses and developers seeking locations with brownfields opportunities. This may simply entail broadening the vision of economic and business development services that many jurisdictions already provide. Nationally, some municipalities maintain an inventory of brownfields sites for planning purposes and to prioritize investment opportunities, while others see inventories as too costly or stigmatizing certain properties.

- **Coordination and/or provision of funding.**
There are many ways to enhance project viability and address brownfields issues. This may include grants and low-interest loans to pay for environmental investigation, cleanup and construction activities. Local efforts (such as economic development subsidies and tax incentives) can also increase the project feasibility. It may also entail identifying and packaging bank financing, outside governmental funding, and non-profit sources of capital. In some instances, direct public investments in infrastructure, site acquisition, risk management, or other project-related outlay is warranted. Financial assistance to local governments to seed brownfields programs or for a specific project are available from federal and state sources on a limited basis.
- **Utilization of a coordinator.**
The numerous issues involved in brownfields redevelopment often make them too complex for any single person or agency to understand fully and direct experience with environmental regulations is often limited. It may be useful to designate a staff person, hire a consultant, engage a nonprofit organization or borrow a state or federal facilitator to implement brownfields activities.

Addressing Liability Concerns - the Environmental Due Diligence Process

Prior to 1980 buyers and sellers of industrial or commercial properties did not worry about the potential for a property's environmental liabilities. That changed with passage of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) otherwise known as Superfund. CERCLA contains provisions for the innocent landowner defense, which protects potential property owners from liability associated with contamination they did not cause. However innocent property owners are only protected if they can prove they did not contribute to the contamination and had no reason to suspect the property was contaminated at the time of purchase. As a result of potential liability concerns from acquiring contaminated property, the Environmental Due Diligence Process was born. The process was given form and definition by the American Society for Testing and Materials (ASTM) in a multi-step format, which is summarized below.

The due diligence process was given form with passage of the Small Business Liability Relief and Brownfields Revitalization Act of 2002. This act created various liability assurances for those who acquire contaminated properties and might not otherwise do so for fear of liability. Among other things, the act defines the steps one must take to conduct "All Appropriate Inquiry" (due diligence)

prior to purchase of a brownfield site, dictates what type of professionals may perform the due diligence, and provides grant funding to perform cleanups. Under the act, Phase I studies (described below) must be conducted to meet the criteria of “All Appropriate Inquiry” and establish a buyer as a Bona Fide Prospective Purchaser.

Being a Bona Fide Prospective Purchaser provides release from liability for existing environmental problems at the time of purchase (as long as the new owner doesn't make the pollution situation worse and takes immediate steps to remediate). If a landowner follows the steps set forth in statute the liability exposure is quantified and capped, providing a higher degree of liability protection and certainty to the redevelopment process.



Installation of monitoring wells at site in Fruita, CO.

Phase I Environmental Audit: Records Review, Site Inspection and Interviews

Generally speaking, Phase I consists of a review of existing records, a site visit and interviews in order to determine if the potential exists for contamination at a brownfield site. As noted above, Phase I is also used to satisfy the “All Appropriate Inquiry” test and provide liability protection under the Brownfields Act of 2002.

In performing the records review it is important to go back as far as the historical record allows, as some types of contaminants are quite persistent. Records such as assessment reports, fire insurance maps, city directories and aerial photographs are all useful. ASTM standards detail what records of both on and offsite areas should be researched.



Monitoring wells for groundwater sampling.

Site inspections are geared toward identifying existing or past signs of potential contaminant sources or contaminant release points. The inspector should note signs such as discolored soil, floor drains, sumps, underground storage tanks, areas of excessive debris accumulation, stressed or complete absence of vegetation. Additionally, it is important to obtain specific knowledge regarding the property, including geologic/hydrologic conditions, water and utility usage on the site and notation of surrounding property usage. Again, the ASTM standard details this information.

The final part of the Phase I process is the interview phase. Just about anyone with firsthand knowledge of past and present activities on the property should be contacted. Examples might include the past and current property owners, occupants/tenants, neighbors, and regulatory agencies. A final compilation of all observations and conclusions comprises the final Phase I report. If the assessment did not indicate a significant potential for environmental risks, then further investigation is not warranted. If the report is inconclusive or identifies potential environmental risk, a soil, vapor, and/or groundwater sampling plan (also known as a Phase II) may be warranted.

Phase II: Sampling and Risk Assessment

Generally, a Phase II is more detailed, relying less on visual inspections and more on actual sampling. Elements of a Phase II may include collection of soil, vapor and groundwater samples. The samples are then sent to a qualified laboratory for analysis. Interpretation of the results is the job of the environmental professional. The results should be compared to known standards or, lacking standards, qualified guidance numbers in order to determine if cleanup is needed. Often a Phase II can define environmental concerns sufficiently to allow the purchaser and/or lending institution to decide whether to purchase or lend on the property. Further sampling and assessment may be necessary to quantify potential cleanup costs.

If there is a pollution concern, a risk assessment is sometimes done to determine how people and/or the environment are being affected, discover the exposure pathway, and identify the toxic risk. All this information feeds into developing an effective remediation/cleanup plan to reduce toxic risk to humans and/or the environment.

Phase III: Remediation/Cleanup Planning and Design

Remediation is necessary when contamination exceeds a standard or poses an unacceptable risk to public health and the environment. Often remediation can be done as part of the development plan. For example, construction of buildings may entail significant excavation of contaminated soil, or site development may involve extensive hardscaping, which may serve as a cap to prevent further migration of contamination. It has been found that many contaminants degrade naturally, thereby limiting the scope of cleanup. Removal of contaminated soils and prevention of any additional ground water contamination may suffice as a remedial effort. Numerous instances of innovative remedial efforts exist in Colorado.

In many instances the mere presence of contamination does not always justify cleanup. It is the exposure or potential exposure of populations to unsafe levels of contamination that triggers a cleanup. It may be that the contamination does not pose a threat to public health and the environment within the proposed redevelopment scheme. Feel free to discuss the specifics of your approach with VCUP staff.

Groundwater cleanup criteria usually rely on a Maximum Contaminant Level (state standard). The remediation plan may propose a risk-based closure for a specific use. Risk-based closure means that contamination may be left on site. For instance, cleanup for industrial use may allow for a higher contaminant level than if the site were to be used for residential construction. Similarly, a risk-based closure may entail eliminating exposure pathways, i.e.—capping the soil so there is no human contact, such as with a parking structure.

Environmental covenants may be needed to notify future parties about persistent contamination that may be left in place under a risk-based closure. This is a method of managing the site to prevent exposure to future site users. For instance, industrial cleanup standards are not quite clean enough for residential use; the environmental covenant will notify future residential developers that additional cleanup needs to be performed. If waste is consolidated in an onsite location and capped, an environmental covenant would notify future property owners not to dig in that location, or to have a plan to deal with the buried waste.

Environmental Insurance – A Means to Manage Risk

Even after testing and professional engineering estimates, actual cleanup costs are certain only upon completion. This financial uncertainty prior to cleanup can reduce market interest in a property. Similarly, financial risks associated with potential third party lawsuits and regulatory re-openers can further reduce interest in a property. Environmental insurance gives prospective purchasers, developers and lenders the ability to quantify risks and returns, and effectively plan their investment strategy. An array of privately underwritten environmental insurance products, emanating from the property and casualty insurance industry, has been developing since the early 1990s. These various insurance policies are designed to transfer risk to the third party insurer, thereby relieving potential environmental deal-breakers. Environmental insurance products cover three different liability areas:

- Cleanup Cost-Cap (Stop-Loss) Coverage - Places a limit on the cleanup costs site redevelopers may have to pay.
- Pollution Loss Liability – This coverage applies to costs associated with any future required site cleanup including re-openers where regulation changes regarding a known condition necessitates additional, post-closure site work. This may also include formerly unknown conditions that were not

discovered during due diligence. This coverage can also cover the costs associated with business interruption losses and lawsuits associated with liability claims made by third parties.

Both types of coverage carry deductibles, limits, and relatively short terms and may not be available to cover all situations. The degree of environmental liability management may be particular to the individual buyer, lender, or deal. The costs and the parameters of each deal will determine the liability management need.

While environmental insurance increases transaction costs, it creates a more predictable investment market, enhances the stability of a particular investment through risk management, and can actually enhance project feasibility.

V. Technical and Financial Resources

There are a wide number of technical and financial assistance programs currently available to local governments in Colorado. Technical assistance programs range from broader community assessments to site-specific testing for contaminants and assistance in developing cleanup plans. Financial assistance includes state and federal grants and loan programs as well as income tax credits. The use of tax increment financing is yet another tool to fund the redevelopment of brownfield sites.

The list of resources below is not exhaustive. There are numerous other agencies that provide funding for brownfield cleanup and redevelopment. Identification of an end-use often leads a community to suitable funding sources. For example, cleanup of a degraded river corridor and creation of a trail along that corridor may involve seeking funds from state and federal transportation agencies or U.S. Fish and Wildlife in the Department of the Interior. Communities should be creative and “think outside the box.”

Finally, it is unlikely that any one program will prove a panacea for a community’s brownfield redevelopment efforts. Communities should consider a combination of technical and financial resources in

order to maximize the cleanup and redevelopment potential of a site.

TECHNICAL ASSISTANCE PROGRAMS

Voluntary Cleanup Program, Colorado Department of Public Health and Environment (CDPHE)

The Voluntary Cleanup and Redevelopment Act was passed in 1994 to facilitate the redevelopment and transfer of previously contaminated property. The Voluntary Clean Up Program (VCUP) within the Colorado Department of Public Health and Environment (CDPHE) is set up to rapidly provide an answer to the adequacy of a proposed cleanup or request for no further action. In doing so, the program provides some clarification as to the extent of the regulatory liability presented by contamination at a site proposed for redevelopment. Petitions or cleanup plans are reviewed within 45 days of receipt usually for a maximum cost to the applicant of \$2000. The VCUP will consider any reasonable cleanup methodology and is receptive to the risk based approach to site remediation. Often a site might be in the middle of contamination emanating from offsite and clarification is needed regarding the responsibilities of the site owner. In these cases, the VCUP makes a finding that the owner bears no responsibility for cleaning up contamination coming from offsite, but rather must protect future users of

that site. Guidance is available online regarding voluntary cleanup in Colorado. Look for the Voluntary Cleanup Roadmap online at : www.cdphe.state.co.us/hm/vcradoc.pdf.

Not all sites are eligible for inclusion under the VCUP. However, voluntary options for all types of sites are addressed in the Roadmap.

Remediation Section, Division of Oil and Public Safety (OPS), Colorado Department of Labor and Employment

The Remediation Section designs and enforces cleanup standards governing remediation of petroleum contamination, responds to emergency situations involving petroleum releases, approves remediation costs for reimbursement from the Petroleum Storage Tank Fund (see below), approves cleanup plans and determines when sites can be issued “No Further Action” letters.

The Remediation Section has contracts with ten environmental consulting firms to perform assessments and cleanups at sites where no viable responsible party can be identified. Regulations, guidance documents and report formats are available online at:

<http://oil.cdle.state.co.us>.

Targeted Brownfield Assessments, CDPHE

Targeted Brownfield Assessment Assistance is available at no cost to public or non-profit entities.

Preference is given to entities with a clear vision for redevelopment of a brownfields site. CDPHE personnel are available to perform all phases of environmental assessments (Phase I and II) and evaluate cleanup options. Application forms are available online at:

www.cdphe.state.co.us/hm/rpbrownfieldsapp.pdf

Targeted Brownfield Assessments at Petroleum Sites, OPS, Colorado Department of Labor and Employment

Targeted Brownfield Assessment assistance is available at no cost to public or non-profit entities. Preference is given to entities with a clear vision for redevelopment of a brownfield site. OPS personnel are available to perform all phases of environmental assessments (Phase I and II) and evaluate cleanup options. For more information on the Targeted Brownfield Assessments at Petroleum Sites program, contact OPS at **303.318.8539**.

Colorado Brownfields Foundation

The Colorado Brownfields Foundation (CBF) is a non-profit intermediary for communities, local governments, and commercial enterprises to help redevelop and reuse brownfields sites. CBF can provide advisory services regarding redevelopment, financing, economic development, and environmental issues, along with administering periodic grant programs. CBF coordinates formal workshops as well as educational programs upon request (for any

size group). A unique feature of the CBF is its willingness to take title to unmarketable properties, mitigate environmental issues, and deliver clean property to the market.

CBF administers an Environmental Due Diligence (EDD) grant program to facilitate property transactions and financing. Under this technical services grant program, any community may be eligible to receive environmental assessments on a property, or multiple properties, at no cost to the community or the landowner. The EDD Program will engage consultants and conduct assessments on behalf of selected communities.

CBF can partner with local governments and receive and administer state and federal brownfield grants. As a 501(c)(3), CBF can receive donations of cash and property for a project and provide charitable contribution deductions. Additionally, CBF is an approved Colorado Enterprise Zone project and can provide state tax credits for donations of cash and property related to a redevelopment project.

Please visit:

www.coloradobrownfieldsfoundation.org

for more information.

Community Assessments, Colorado Office of Economic Development

The community assessment program is a service provided by the Colorado Office of Economic Development and International Trade and the Economic Developers Council of Colorado. A community assessment is the formal process of examining the social, political, economic and environmental conditions within a community or region. Under this program, outside economic development practitioners, community development specialists, and other team members will provide the community with a SWOT (strengths, weaknesses, opportunities and threats) analysis, resources, and contact information so that it may plan, execute and complete a locally conceived and driven economic development strategic plan.

For more information, contact the Colorado Office of Economic Development at (303) 892-3848 or go online to view the community assessment training and process manual at www.advancecolorado.com or www.edconline.org.

Revitalization Assistance, Colorado Community Revitalization Association

The Colorado Community Revitalization Association (CCRA) administers the national Main Street Program, a program to revitalize downtown districts within the context of historic preservation. In

addition, CCRA provides a wide number of technical assistance services to neighborhoods and communities throughout Colorado. These services include design and historic preservation assessments, evaluation of infill construction, business mix and cluster analysis, and assistance in building effective public and private partnerships.

For more information on the Main Street Program or other revitalization assistance programs, contact CCRA at **(303) 282-0625** or go online at: www.ccraonline.org.

FINANCIAL ASSISTANCE PROGRAMS

Petroleum Storage Tank Fund, OPS, Colorado Department of Labor and Employment

The Petroleum Storage Tank Fund provides reimbursement to eligible applicants for allowable costs incurred in cleaning up petroleum contamination from underground and aboveground petroleum storage tanks, as well as for third-party liability expenses.

The program reimburses eligible applicants for monitoring wells and soil borings, impact abatement (including the temporary provision of a domestic water supply), site assessment and remediation plans, remediation equipment costs and the removal of contaminated soils. The removal of the storage tanks themselves is not an eligible activity under the program..

Eligible Recipients

Tank Owner/Operators – To establish eligibility for fund benefits once contamination is discovered, tank owners and operators must demonstrate compliance with regulations governing tank registration, release detection, release reporting and closure. Non-compliance with these regulations can result in a percentage reduction of the reimbursement award. Substantial non-compliance can result in denial of eligibility for fund reimbursement.

Tank owners and operators are responsible for the first \$10,000 of remediation costs and the first \$25,000 of third-party liability expenses. After meeting the deductible, an eligible tank owner or operator is eligible for reimbursement of all allowable costs less any percentage reductions. Allowable costs are those that arise directly from the performance of necessary assessment and corrective action in accordance with the requirements of the OPS.

Reimbursement cannot exceed \$2 million per release occurrence. Aggregate reimbursement per fiscal year for a single applicant remediating multiple occurrences cannot exceed \$3 million. No more than \$50,000 will be reimbursed until the site has an approved Corrective Action Plan (CAP), which includes a Technical and Economic Feasibility Study.

Non-Responsible Parties – Certain entities deemed to bear no responsibility for the release are eligible for reimbursement without paying any deductible and without penalty for prior non-compliance with storage tank regulations. These applicants include property owners, lenders, and, in very limited circumstances, tank owners or operators. Twenty percent of the fund is set aside for reimbursement to applicants in this category. Applicants who are deemed eligible in this category may request the OPS to perform the cleanup directly using state contractors as part of the state program.

Funding Cycle

This program provides grant funding on an ongoing basis.

Contact Information

For more information on the Petroleum Storage Tank Fund program, including application materials, contact the Division of Oil and Public Safety at **303.318.8516** or go online at: <http://oil.cdle.state.co.us/Oil/Fund/fundindex.asp>.

Federal Tax Incentives

Federal tax incentives are available, depending on the location of the site. The specifics of these incentives have recently changed to make them more attractive. Changes include the elimination of many of the site eligibility requirements and accelerating the amortiza-

tion schedule of incurred costs. These incentives can be subject to frequent changes. The eligibility determination is made by CDPHE. For more information, go online at:

www.epa.gov/swerosps/bf/bftaxinc.htm

Contaminated Land Redevelopment Credit, Colorado Department of Revenue

In 2000, legislation was passed to create state tax incentives for the cleanup of brownfields. The tax incentive is in the form of an income tax credit and is awarded for costs incurred on the first \$300,000 spent on remediation. Eligible projects must be within the municipal boundaries of cities with populations over 10,000 and the cleanups themselves must be conducted through the Voluntary Cleanup Program. Upon completion of the cleanup and approval of a “no further action” determination application, CDPHE issues a certificate the owner then takes to the Department of Revenue to receive the state income tax credit.

The tax credit is computed as follows: 50 percent of the first \$100,000 expended for project cleanup; 30 percent of the second \$100,000 expended; and 20 percent of the third \$100,000 expended. Basically, if the cleanup costs more than \$300,000, the property owner is entitled to a \$100,000 income tax credit.

For more information, please visit the Department of Revenue website at:

www.revenue.state.co.us/fyi/html/income42.html

Colorado Brownfields Cleanup Fund, CDPHE

CDPHE has limited state funds to assist with cleanups of contaminated properties or to match funds from other agencies to do cleanups. Utilization of these cleanup funds is done on a priority basis. Sites where there is no responsible party, sites that pose a threat and where redevelopment will benefit the public are the highest priority sites for utilization of these funds.

For additional information, please visit:

www.cdphe.state.co.us/hm/rpbrownfields.asp.

Colorado Brownfields Revolving Loan Fund, Colorado Housing and Finance Authority

Colorado public and private entities are eligible for low cost loans to perform cleanups of hazardous substances and petroleum contamination. Loan terms are flexible and can be modified to meet the applicant's needs. The Revolving Loan Fund is governed by a coalition of state and local government members. The program is administered by the Colorado Housing and Finance Authority's commercial lending division. Among other eligible uses for the loans is the purchase of environmental insurance to limit liability for future additional cleanup costs.

Some loans from the Brownfields Revolving Loan Fund require a 20 percent match, which can be in-kind. Total loan amounts are capped at \$2 million

per site. Prior to approval of a loan the applicant must have their cleanup plan approved by the CDPHE Voluntary Clean Up Program. The Colorado Brownfields Revolving Loan Fund has a limited capacity to provide grants to perform cleanups.

Additional information, complete program guidelines, and application materials may be obtained online at: www.colohfa.org (search "brownfields") or by contacting the Colorado Brownfields Foundation at (303) 991-0074.

Colorado Heritage Planning Grant Program, Office of Smart Growth (Colorado Department of Local Affairs)

The Colorado Heritage Planning Grant (CHPG) Program was created to assist communities cooperatively planning to manage growth. Planning grants are awarded to multi-jurisdictional projects around the state.

Eligible Recipients:

Counties, municipalities and Title 32 special districts are eligible for planning grants under the program. Interested entities must submit their application jointly with at least one other governmental entity.

Eligible Uses:

Planning projects addressing critical growth management issues, including, without limitation, land use and development patterns, transportation planning, mitigation of environmental hazards, and energy use. Program funds may not be spent on cleanups.

For more information on the CHPG Program, please contact the Office of Smart Growth at **(303) 866-4552** or go online at:

www.dola.state.co.us/smartgrowth.

Community Development Block Grant, U.S. Department of Housing and Urban Development

The federal Community Development Block Grant (CDBG) Program was established by the Housing and Community Development Act of 1974. The program is designed to help communities meet their greatest community development and redevelopment needs, with particular emphasis on assisting persons of low and moderate income. The program has two main components: Entitlement Areas and the Small Cities Program.

Essentially, entitlement communities are those cities that have a population of at least 50,000 and counties that have a population of 200,000 or more in their unincorporated areas. Each entitlement community receives a direct block grant distribution annually from HUD. CDBG funds can be used for brownfield cleanup and redevelopment, and a

number of entitlement communities along the Front Range are currently dedicating a portion of their block grant monies for elimination of brownfields under the CDBG “slum and blight” eligibility guidelines.

The Small Cities Program covers the rest of the state and is administered by the Colorado Department of Local Affairs (DOLA). DOLA dedicates Small Cities block grant monies to three purposes: affordable housing projects, economic development and public facilities. DOLA is currently considering using a portion of the public facilities project funding for brownfield cleanup projects.

For more information on the Small Cities Program, including application materials, please visit the DOLA website at:

www.dola.state.co.us/LGS/FA/cdbg.htm.

Federal Brownfield Grants, EPA

Planning and assessment assistance is available to local governments seeking to redevelop brownfield sites. Applications are accepted once a year on a competitive nationwide basis. The applicant may submit up to five sites per funding cycle. The applicant must own the site by the time the grant is awarded and a Phase I must be completed prior to submitting the grant application. Grants of up to \$200,000 are available to assist in the planning and assessment phase of brownfield redevelopment.

Local governments and non-profits are also eligible for cleanup grants under the program. EPA also has available (under the same funding cycle) grants of up to \$1 million to capitalize Revolving Loan Funds.

There is a 20 percent match requirement on EPA grants.

For additional information, please go online at www.epa.gov/brownfields.

Tax Increment Financing: A Brief Overview

One approach to financing the cleanup and redevelopment of brownfields is the creation of a tax increment financing (TIF) district. TIF is a financing technique wherein bonds are issued to fund redevelopment and the bondholders are repaid through the new (or incremental) tax revenues generated by new construction/development. Only urban renewal authorities and downtown development authorities have the ability to create a TIF district.

For example, suppose the City of Anytown, Colorado creates a Tax-Increment-Financing (TIF) District to facilitate redevelopment of several adjacent properties, including aging and vacant industrial buildings and former rail yards. Assume the TIF district would be approximately 32 acres in size and the redevelopment will add new industrial and retail buildings to take advantage of short-haul rail access, nearby highways, and downtown access.

Once the properties within the TIF district are redeveloped, property values will increase, which results in increased tax revenues. Property tax revenues from the TIF district are split into two revenue streams:

1. The first stream (base) is equal to the “As-Is” property tax revenues without redevelopment and goes to the same city, county, school district, and other taxing entities (the base is allowed to increase with the market over time).
2. The second stream (increment) is the net increase in property taxes resulting solely from new development.

The increment can be used to fund the redevelopment through Tax Increment Financing, which diverts the increment revenues to pay for annual debt service on construction bonds. Taxing entities maintain the same level of tax receipts as prior to the creation of the TIF district, and mill levies do not change as a result of the tax-increment-financing.

While local governments themselves do not have the ability to create TIF districts, they do have a variety of financing tools available to them, including the creation of business improvement districts and downtown development authorities.

VI. Case Study: Rangely, Colorado

The Town of Rangely, a small western slope community located in North-west Colorado, has successfully begun removing environmental obstacles to business growth along Main Street.

The Rangely area is endowed with natural resources that drive the local economy. Wildlife and the habitats that support them create the quality of life for many residents and support a tourism industry highly dependent on hunting and fishing. Following a major oil discovery in 1947, the Rangely Oilfield became the largest producer in the Rocky Mountain region and the sixth largest in the United States at that time. Over time, faced with competition from newer finds and improved extraction technologies, the region's petroleum-based workforce has contracted significantly.

Typical of most every community in Colorado, Rangely was faced with shuttered gas stations standing economically stagnant and falling deeper into disrepair. In pursuit of economic health and community pride, town leaders persisted and successfully improved the appearance and business mix of their community.



5S Gas Station site in Rangely, CO

Before Environmental Cleanup

Rangely's one-mile long Main Street was impacted by two abandoned and shuttered service stations. The 5S Gas Station greeted drivers as they rounded the bend and approached town from the west. The Galaxy Gas Station is centrally located on Main Street and an eyesore for nearby businesses, residents, and travelers passing through. What were once small, locally owned businesses had been transformed into community blemishes. The sites had become unkempt, run down, and a source of public disdain.

These idle properties impacted the community in a number of subtle ways. Boarded up and dilapidated, they lent Main Street a somewhat ramshackle appearance. The cohesiveness of Rangely's business district stuttered around these gas stations, with surrounding properties unable to attract capital investment and maintain inviting appearances.

Reuse Obstacles

While the sites were under different ownership, they shared a similar history. Both gas station properties sat vacant and abandoned on Main Street for about 20 years. Year after year the properties continued to collect property tax liens for unpaid taxes. Back taxes were owed to thirteen separate taxing entities, all of which required independent negotiations to resolve. The overriding issue seemed to be liability concerns as various buyers walked the site over the years and wrongly perceived a "Superfund" problem. In truth, while the environmental concerns were warranted, the problems were far from Superfund caliber.

The 5S had multiple lien holders for back property taxes, including the town itself. Owners of the 5S went through bankruptcy in the mid-1990s, but the bank refused to foreclose on the real estate due to suspected contamination from leaking underground storage tanks. Although petroleum issues today are well understood and easy to address, over time the 5S gained a reputation around town as a significant cleanup challenge. These factors, combined with a

lull in Rangely's energy-based economy in the 80s and 90s, left the site in its abandoned condition. The Galaxy had a single-lien holder against property taxes due. Routine testing showed nearby drinking water wells to be unaffected. While the community did not perceive the Galaxy to have major environmental problems, the buried gas storage tanks could be hiding a petroleum spill. This uncertainty, together with aging buildings and a weak economy, kept the Galaxy from attracting a new use.

Dilapidated conditions at these abandoned properties and their impact on Main Street were apparent to the community and local government officials. As is the case in many Colorado municipalities, potential environmental liabilities kept the town from taking title to these abandoned properties. Town officials, lenders, and the property owners themselves balked at the environmental complexities of clearing the sites for reuse. The owner of the 5S property stated it would not be worth his time to go through a process to make it an economically productive site.

Persistence Pays Off

Rangely's revitalization efforts grew out of a community assessment by the Colorado Office of Economic Development and International Trade and the Economic Developers Council of Colorado. The community assessment singled out the presence of the 5S and Galaxy sites on Main Street as an impediment to economic development. The Rangely



Galaxy Gas Station site in Rangely, CO

Development Agency (RDA), the local downtown urban renewal authority, decided they would take ownership of the sites and of the problem. By taking ownership, the RDA insulated the town from potential environmental liabilities. The RDA adopted a three-prong strategy: (1) gain ownership and site control; (2) evaluate and mitigate environmental concerns; and (3) find end-users to redevelop the sites.

Consolidating property tax liens to take title was a daunting task given the number of liens, lien holders, and taxing entities. RDA purchased some liens outright for cash. Other liens were donated to the RDA in exchange for property tax credits and environmental indemnifications (promises from the RDA to not pursue legal action against the former lien-holder relating to environmental conditions). Negotiations with the thirteen taxing entities resulted in tax abatements and forgiveness. Persis-

tence paid off as the RDA was able to consolidate property ownership through a process of quiet title acquisition.

Beginning the environmental assessment process brought cost issues to the forefront. Some theorized that petroleum spills may be overshadowed by the naturally occurring hydrocarbons in the native soil. These naturally occurring hydrocarbons might render conditions no worse than background levels, making cleanup unnecessary. Others were concerned by the perception of having a local major contamination problem that needed to be fully characterized and treated. Either way, removal of the underground storage tanks was necessary to make way for new construction and to determine if public health hazards required mitigation.

“Growing interest in the Galaxy block can be directly attributed to the removal of the Galaxy building and environmental closure of the site”

*-Lance Stewart,
Rangely Town
Manager*

To effectively address environmental concerns, the RDA utilized a unique bundling of financial and technical services provided by the Colorado Department of Public Health & Environment (CDPHE), the Colorado Brownfields Revolving Loan Fund (CBRLF) and the Division of Oil and Public Safety in the Colorado Department of Labor and Employment (DOLE). The CDPHE provided groundwater

and soil sampling and the CBRLF loaned the funds to excavate the tanks, test for leaks, and to conduct cleanup as necessary. The Petroleum Storage Tank Fund in DOLE provided cost reimbursement for soil and groundwater cleanup from the leaking underground storage tanks; partial repayment of the CBRLF loan was an eligible activity under the storage tank fund program. A match was provided by the Town of Rangely in the form of providing the earthmoving equipment for the project.

Economic Development Results

Rangely incorporated in the 1940s, growing around its nearby petroleum and natural gas reserves. Field exploration and oil and gas field developers were based in Rangely and, along with troops of laborers and other transitional workers, supported the town's local businesses. The region's oil industry has now matured into a smaller, more stable, settled workforce and the local economy has contracted over time. Now, much of the town's traffic is commuters passing through town on their way to work in other communities. Hunting, biking, and fishing tourists round out Rangely traffic as well as visitors to Dinosaur National Monument. Current economic development opportunities lie in intercepting commuter and tourist traffic, as well as adding to the local business mix. Improving the local business mix starts with providing attractive business locations on Main Street.



Underground tank removal at Galaxy site.

Rangely's economic development strategy includes: (1) beautifying Main Street by eliminating stigma and blight; (2) portraying a pro-business attitude; and (3) recovering wasted assets and putting them back into productive use. Of utmost importance to promoting economic development was creating an attractive business climate by removing Main Street eyesores. An initial, interim goal of Rangely's strategy was to clear the visual hurdles to business development created by the 5S and Galaxy sites.

As cleanup progressed, the Galaxy site attracted attention from entrepreneurs. A new wild game processing business that would cater to local and visiting hunters made offers on the site, but failed to close. Subsequently, a new family-owned liquor store evaluated the construction of a retail building on the Galaxy site.

Prospective Economic Impacts: Former Gas Station Site Reuse

Projected	Galaxy Site	5S Site
New Square Feet Built:	1,500	2,500
Construction Investment:	\$187,000	\$276,000
Property Value post-construction:	\$220,000	\$325,000
New Employment (FTE):	1.5	3.0
Total wages created:	\$30,000	\$60,000
Annual Tax Revenue, post-construction*		
City Property Tax:	\$800	\$1,100
County Property Tax:	\$700	\$1,000
School District Property Tax:	\$900	\$1,300
City Sales Tax:	\$6,750	\$11,250

**These are estimates of direct impacts only and are based on planned construction, stabilized occupancy, and prevailing economic conditions in Rio Blanco County, 2004. Additional property taxes accrue to other taxing entities, but have not been evaluated herein.*

Source: Development Research Partners

Site issues at the 5S station were considerably more complex, both physically and environmentally. Having relatively deep site dimensions and covered by dilapidated buildings had kept reuse interest minimal at this site. However, the buildings have been cleared, the environmental conditions mitigated, and a major blemish has been removed. At the time of this writing, the 5S property is under contract to a local businessman interested in developing and leasing a new commercial building, possibly for office, office-warehouse or retail uses.

Economic benefits extend beyond property boundaries. As the Galaxy's site conditions were addressed and positioned to the market, notable interest grew across the entire block of Main Street formerly impacted by the Galaxy site. According to RDA representatives, the growing interest in the Galaxy block can be directly attributed to the removal of the Galaxy building and environmental closure of the site. New adjacent business activities since the Galaxy cleanup include:

- The existing glass business next to the Galaxy site has made substantial capital investments by upgrading and remodelling;
 - An internet pottery company is renovating an adjacent property;
 - A coffee brewing business is constructing a new structure; and
 - A new four-bay commercial building is under construction across the street from the Galaxy site.
- Small steps work- readying a site for reuse is a reasonable first goal rather than immediately trying to identify an end-user.
 - Anticipate a larger impact area as benefits are likely to confer to surrounding properties.
 - Use creativity in bundling funding options and expect hurdles.
 - Expect unanticipated challenges in addressing environmental conditions, especially regarding timing delays and costs.
 - These projects are time intensive; find the resources to take it to completion.

As described, new construction across the Galaxy block would yield an approximately 5,900 square feet of new commercial space housing jobs for an estimated 17 workers with a combined payroll of \$380,000. Businesses operating in the new space would contribute an estimated \$2,000 in property tax revenue and \$27,000 in sales tax revenue to Rangely.

Lessons learned

- Brownfields activities are a credible and worthwhile local government activity.
- Redevelopment resources will not likely come forth from the private sector, but the public benefit results are tremendous.
- Persistence pays!
- Be proactive.
- Have a champion, someone who can effectively coordinate the project, can be a point person, and who has the heart to carry the project through completion.

VII. Case Study: Alamosa, Colorado

The City of Alamosa is centrally located in Colorado's San Luis Valley, along the banks of the Rio Grande River. The valley floor is known for its agricultural production while surrounding mountains offer mineral and forest resources. Settlers located to what is now the City of Alamosa in 1878. At the same time, the Denver and Rio Grande Railroad established Alamosa as its terminal and trade center for the San Luis Valley. In response to a need for electrical power, in 1911 the Mutual Power and Light Company built a coal-fired power plant adjacent to the Denver and Rio Grande rail line, which supplied coal to the power plant. The property was expanded in 1953 with the addition of several buildings.

As time passed, changing economies and new energy supplies severely hurt demand for power from this old-technology power plant. The facility was decommissioned in 1979 and officially closed in 1981. The facility sat vacant and began to deteriorate. Regular maintenance ceased and the facility fell into disrepair.

Over time, the property became shabby in appearance and fell victim to vandals. Now, through public-private cooperation, once questionable environmental condi-

tions have been quantified and private investment is returning the power plant site to productive use. The property is currently being cleaned up and renovated for new occupancy.

Obstacles to Reuse

In its deteriorating state, the power plant detracted from the community's comprehensive planning goals of promoting in-fill development, preserving neighborhoods, and economically strengthening the historic Downtown. Sandwiched between downtown, in-fill industrial districts, and residential neighborhoods, the decrepit power plant property stood as a physical and psychological barrier separating these districts. Strategically, cleanup and reuse of the power plant property could be the key to creating a more cohesive community and generating redevelopment interest in the adjacent rail yards.



Former Public Service Power Plant, Alamosa, CO

Rail yard activity has greatly diminished over the past several years and many surplus rail properties have been sold for speculative development, but still remain vacant.

Reuse of the property had been blocked by obvious costs of physically bringing the site to a usable state as well as the fear of major environmental contamination issues. The four acre power plant site is covered by multiple buildings, utility huts, storage tanks, and building foundations. What wasn't covered by a structure is generally infiltrated with trash, animal waste, and coal particles. Deteriorated sidewalks and paving required replacement. Below ground, cables and piping traverse the site. A large above ground storage tank sat rusting and peeling.

The original power plant building and associated structures were filled with a variety of metal catwalks, generating equipment, motors, pumps, piping, instrumentation, and other equipment and large pieces of machinery. These fixtures and equipment occupied an enormous amount of space and virtually rendered the interior unusable. The floors and catwalks were piled with inches of broken glass, bird droppings, and other debris. To make the building usable required the removal of equipment and machinery, removal of putrid organic and fecal matter in buildings, and significant cosmetic repairs. Upgrading of structural, mechanical, electrical, and life safety/fire systems was anticipated for any reuse.

The real estate marketplace generally assumes that

old and unsightly industrial sites such as the power plant have significant environmental problems. However, due diligence costs to confirm or refute those assumptions kept parties from even considering an investment in the property. On top of obvious capital needs, unknown environmental conditions condemned the power plant to a downward economic spiral.

Stakeholders & Partners

Attracting redevelopment interest was a team effort. A looming blemish on the landscape, the power plant had been a concern for city officials, residents and community organizations since its closure. The San Luis Valley Development Resources Group (SLVDRG), the Alamosa Uptown River Association, the Downtown Merchants Association, the Chamber of Commerce, and individual citizens were all outspoken in their desire to remove the eyesore. Some parties, including the local historical society, had hopes of preserving architectural features and converting the power plant into a landmark.

The Colorado Department of Local Affairs, Office of Smart Growth (OSG) and the Colorado Department of Public Health and Environment (CDPHE), selected the power plant as a pilot site for study. Site visits and research were conducted and presentations made to city council and stakeholders to inform the community about redevelopment scenarios and cleanup options. CDPHE conducted Phase II environmental testing at the power plant site.

Aboveground storage tank at Alamosa Power Plant site.



Ultimately, the coordinated effort of local and state partners encouraged and enabled a local citizen to buy the power plant and begin the cleanup and redevelopment process.

Key Steps in Generating Redevelopment Interest

Perceived environmental problems had been at the center of impasse between the community and the utility company that previously owned and operated the power plant. The community assumed the utility company was required by law to address environmental conditions at the site since they caused the pollution. The utility company's position was they no longer owned the

property and therefore had no further obligation. This deadlock, resulting from a lack of information and education, made the city hesitant to invest its resources.

The City of Alamosa decided to take a proactive approach. City leaders initiated the partnership with CDPHE and OSG. The partnership's goal was to galvanize the efforts of stakeholders into a cohesive effort. A key step toward success was resolution of the environmental

unknowns at the site which were hindering its redevelopment. CDPHE conducted groundwater and soil sampling activities under the state's Targeted Brownfields Assessment grant program. Contaminants were found in soils, but below levels that require formal cleanup action (other than capping). Minor groundwater contamination was discovered, but at levels not deemed to be significant. PCBs (once used for electrical insulation) were expected on the site, but were not found. In all, the site was found to be in relatively good condition, environmentally speaking. Satisfying these environmental concerns was a major step in attracting private capital to the power plant.

“The public-private partnership that emerged here in Alamosa was the key to moving the power plant property redevelopment forward.”

*- Mike Wisdom,
SLVDRG*

Another key step was empowering the community with a vision for the site. OSG engaged an economic consultant to provide an objective evaluation of reuse approaches and opportunities for the power plant. This evaluation considered property conditions and community impacts of the power plant in its decrepit state. Economic

development opportunities, reuse scenarios, resulting fiscal impacts, and potential implementation strategies were identified. This effort did not result in a specific recommendation, but rather a series of potential scenarios and road maps to guide the community in their decision-making.

City officials hosted a public meeting and invited interested parties and stakeholders. Environmental assessment results and reuse opportunities were reported and discussed. Various stakeholder interests held a candid and lively discussion on the future of the power plant property. The convergence of interests and ideas focused attention on next steps.

With environmental hurdles cleared and strong community support present, a private citizen emerged as a willing investor. An Alamosa resident bought the power plant and has started implementing a cleanup plan. He formed a partnership with another firm whose expertise included dismantling

equipment and clearing debris, and accepted their in-kind services as an equity investment. Bird droppings, vermin, and putrefying waste was removed and sent to a composting facility for recycling. The dilapidated above-ground storage tank was sold to a nearby farmer who plans on refurbishing and using it on the farm. Catwalks, steam pipes, and generating apparatus are being recycled as scrap metal. Some of the generating equipment was purchased by the Bolack Electro-mechanical Museum in Farmington, New Mexico. The new owner is donating a corner of the property to the City of Alamosa for public parking, thereby providing a public benefit for the community.

SLVDRG, Alamosa’s local economic development agency, has provided key facilitation services to coordinate public-private efforts, obtaining a CDPHE cleanup grant to help remove the waste and to identify possible relocation incentives for future tenants. SLVDRG emerged as a catalyst in this effort and was key to moving the deal forward.

The Alamosa power plant is now being cleaned and repositioned for reuse. This success story resulted from the convergence of various interests to forge a common vision- that of a future without the specter of a decrepit building in the way of revitalization. Out of a veritable boiling pot of ideas and possibilities came community support for action and an awareness of partnering opportunities. The stage was set for a pioneer to step forward and take the challenge. The community’s proactive stance has

certainly generated the key interest necessary to redevelop the Alamosa power plant.

Reuse Scenarios and Public Benefits Created

A change in highest and best use from a cluttered unsightly jumble to an attractive and usable building and grounds can:

- Create economic and community development potential;
- Turn a former liability into a community asset;
- Improve physical, psychological connections between Downtown and south Alamosa; and
- Grow community pride, not only from beautifying their community, but by joining stakeholders to successfully work toward a shared success.



Alamosa Power Plant site

Many specific reuses are being considered; however, the cleanup timeline makes it premature to identify specific end-users at this time. Uses being considered include loft housing, a microbrewery, and commercial or industrial tenancy. For illustrative purposes, an industrial reuse of 20,000 square feet would:

- Yield an estimated property market valuation of \$800,000;
- Potentially support up to 40 full time equivalent employees with aggregate wages of \$852,000 annually;
- Provide Alamosa County real property tax collections of around \$6,000 (General Fund only); and
- Provide City of Alamosa real property tax collections of around \$2,000 (General Fund only).
- In its former decrepit state, the power plant was vacant with property taxes totaling about \$4,000 with no on-site employment (compared to \$8,000 in property taxes and up to 40 jobs in a new use).

Cleanup and re-use removes an eyesore, resolves public safety and nuisance issues, and furthers community goals of in-fill development, historic preservation, and community enhancement.

Lessons Learned

- There is power in numbers: identify all affected parties, identify common issues, and forge a common goal.
- Seek out and utilize the specialized expertise available within your own community.
- Bring in outside expertise if needed. An independent opinion looking in from the outside can provide a unifying frame of reference.
- Look within existing community groups and resources to find partnerships; the SLVRDG was always there, it was the proactive relationships that developed through a common goal that brought their facilitation skills to the table.
- Look forward for solutions, rather than dwelling on past problems or disputes.
- Creating a positive vision for the community can move stakeholders into a future-thinking mode.
- A change in highest and best use for a property is as simple as taking an unmarketable site and turning it into an attractive usable property.

- Delivering an attractive and usable property to the market is a practical interim goal; uncertainty about the ultimate end-user is a reasonable risk given the prevailing local economic conditions.
 - Eliminating ugliness improves attractiveness; eliminating the decrepit look of the power plant will make it more attractive for a new use and beautify the surrounding area.
 - A change in use can provide significant benefits to the local tax base and job market.
- Identified specific activities to improve feasibility of reuse:
- a) Recycle/salvage equipment and steel to recover costs
 - b) Sale of some historical equipment to a museum to recover cost
 - c) Engage private funding partnerships
 - d) Use of a nonprofit facilitator for fundraising and grant writing
 - e) Utilize public-private funding partnerships including state grants and resources, tax credits (historical, enterprise zone), and local incentives.

Strategies used to facilitate reuse

Evaluated re-positioning the property for reuse:

- Identify/prioritize redevelopment interests
- Evaluate property control/ownership options
- Identify and quantify physical obstacles to redevelopment
- Identify and quantify potential redevelopment options
- Plan environmental closure through Colorado Voluntary Cleanup Program

VIII. Case Study:

David A. Lorenz

Regional Park, Colorado

Background of Site

The County Line Landfill (CLL) was located well to the extreme south of development associated with the Denver Metropolitan Area when it began operation in the mid-1960s. The pre-Subtitle D

facility was constructed without a containment or leachate collection system. As with many municipal solid waste (MSW) facilities across the United States, urban growth surrounded the CLL with residential and industrial development. Because of this development and growing shortages of affordable parkland in the area, the CLL, which was closed in 1987, presented a unique opportunity to convert the 85-acre vacant site into athletic fields. This park fills a critical need to provide safe places for kids and adults to play at a time when South Suburban Park and Recreation District (SSPRD) has



Soccer league in action at former County Line Landfill site, Arapahoe County, CO.

experienced a 270 percent growth in youth sports. Major funding for development came from a citizen-approved General Obligation Bond, issued in 2000 based on SSPRD's desire to meet a critical need for athletic fields.

In 2001, the capped landfill was leased from Arapahoe County by SSPRD at no cost for 15 years, with options to renew or purchase. The first phase of the development on the CLL, now known as the David A. Lorenz Regional Park, was completed in 2003. It consists of two synthetic sports turf multi-purpose fields and one softball/baseball field, a BMX bike track and an 18-hole disc golf course. Future phases will include eight additional artificial grass fields, a dog park, an inline hockey rink, a skate park and loop trail.

Key players in this project were the senior management and design staff at SSPRD for development of the successful concept to use the closed landfill for recreation uses, Arapahoe County and Waste Management of Colorado, Inc. (WMC) who greatly assisted in both the political and technical processes to convert the landfill to a sports complex, American Civil Constructors, Inc. (ACC) the lead designer and general contractor for the project, and Golder Associates Inc. (Golder) who provided design and construction quality assurance services for the liners and gas collection system.

Special Environmental Considerations

When the concept of transforming the closed landfill into playfields was initially proposed, a number of hurdles had to be overcome. During early stages of waste placement, excess water accumulated behind an earthen berm, resulting in elevated ground water levels that saturated some of the waste. The Colorado Department of Public Health and Environment issued a Notice of Violation in 1983. A dewatering system comprised of wells was implemented by Arapahoe County and WMC with about 20 million gallons pumped to a local wastewater treatment plant. This system was shut down and decommissioned in 1999 in favor of Monitored Natural Attenuation as the appropriate corrective action for the shallow groundwater zone. Consequently, no net increase of infiltration was an important environmental consideration affecting development.

The theme of the master plan was “trash to treasure,” converting a landfill to a recreation complex, with an emphasis on the use of recycled materials – a natural theme considering the function of the landfill itself. Five recycled products were used in the construction of the project:

1. rubber as infill in the synthetic turf
2. rubber parking blocks
3. asphalt for the parking lot

4. crusher fines which were a by-product of a stone crushing operation
5. concrete blocks from the old Stapleton Airport runways for a retaining wall

Because the original cap was graded at a constant five percent slope and most of the new fields were to be at a one percent slope, and because no cuts were allowed to be made in the existing clay cap, the entire area had to be filled. The amount of fill ranged from two feet to fifteen feet. Every source of soil was analyzed for its engineering properties by Golder to assess the potential for future settlement or swell. All soil materials were placed as structural fill to a dry density of 95 percent of the maximum dry density and strict moisture content requirements to limit the potential for settlement or swell in the future. The goal was to create a fill that would not add any appreciable settlement that could be attributed to the ongoing decomposition of trash in the landfill.

Conclusions

The former CLL presented a unique opportunity to recycle an 85-acre landfill into athletic playfields. This year-round amenity will help fill a critical shortage of athletic fields for SSPRD and will provide thousands of

youth and adults with a variety of recreation activities. The project is totally sustainable and can be maintained in a cost-effective manner. The fields will be available for play year-round. Because of reduced maintenance costs (compared to a typical irrigated playfield), the SSPRD will recoup its development investment in eight years. The potential environmental impacts have also been addressed by preserving the integrity of the closed landfill. The development has become a model for other recreational agencies and school districts, who have expressed interest and the visited the former landfill site, which is now a community asset.

Source: Leonard Butler, Waste Management of Colorado, Inc.



Bike course at former County Line Lanfill site