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Equitable Redevelopment of Petroleum Brownfields for Zuni Pueblo and Other Tribal Communities

Office of Sustainable Communities Smart Growth Program

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U.S. Environmental Protection Agency

Washington, DC 20460

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Introduction

The Promise of Petroleum Brownfield Redevelopment

In thousands of communities across North America, former gas stations, auto repair shops, and other sites contaminated with oil and gas threaten the environment, potentially harm human health, blight neighborhoods, and block economic development. These sites, known as petroleum brownfields, are often abandoned because the process of assessment, cleanup, and redevelopment can be expensive, time-consuming, and legally complicated.

However, when these barriers are addressed, petroleum brownfield sites can serve as catalysts for the revitalization of the surrounding neighborhoods. The brownfield assessment and clean-up process can be used to start a broader conversation about community needs and opportunities that allows residents to work together to attract public and private investments and achieve their vision for their community.

Because petroleum brownfields are often located in overburdened neighborhoods with economic, environmental, and other challenges, using these sites as catalysts to foster larger, community-led redevelopment efforts can be a powerful tool for achieving more equitable environmental and economic outcomes. In the short term, petroleum brownfield cleanup may protect against contaminated groundwater, reduce human cancer risks associated with even low-level gasoline exposures, and even boost the real estate value of surrounding properties. In the long term, redevelopment of these sites can lead to new jobs and residents in the neighborhood, and a stronger economy overall. Perhaps most importantly, redevelopment of contaminated sites can improve the lives of families living near these properties.

Over the past two decades, federal, state, tribal, and non-governmental stakeholders have identified a range of strategies that can help communities recycle contaminated properties into new, sustainable, and productive uses that integrate community resilience, economic revitalization, social equity, and environmental improvement. This document compiles best practices and principles from petroleum brownfield redevelopment, smart growth, and equitable development into a planning guide, organized into a step-by-step revitalization process. Each step offers a menu of strategies that can be tailored to fit the specific needs and context of each community.

Zuni Pueblo - Photo credit: John Foster

Smart growth is a development approach that aims to create more livable communities by revitalizing the already-built environment instead of surrounding farmland or natural areas. It can also foster more efficient development in new areas. Smart growth allows communities to achieve multiple economic, social, health, and environmental benefits through the strategic investment of limited resources.

Smart Growth Principles

In 1996, the Smart Growth Network developed ten principles for smart growth to guide planning strategies at the local level.

1. Mix land uses
2. Take advantage of compact building design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Strengthen and direct development towards existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair and cost effective
10. Encourage community and stakeholder collaboration in development decisions

Purpose of This Guide

The development of this guide was inspired by three petroleum brownfield sites located within the Zuni Pueblo, the specific community needs identified by Zuni representatives, and the unique circumstances facing tribal communities more generally when confronting petroleum brownfield redevelopment. Several U.S. Environmental Protection Agency (EPA) Headquarters offices and EPA's Region VI office have collaborated to develop this guide via EPA's Smart Growth Implementation Assistance program. Working closely with Zuni Pueblo officials they have designed this guide to assist the Zuni Pueblo and other tribal communities in redeveloping petroleum brownfield sites in ways that support self-determination and advance the economic conditions, health, and quality of life of the tribal community. Many topics covered in this guide also apply to redeveloping non-petroleum brownfield sites containing other types of contaminants.

This guide includes resources for all of the stakeholders involved in petroleum brownfield redevelopment. Tribal members, different tribal government program managers, the tribal council, business owners and developers, state and federal agencies, and contractors all have important roles to play. In many cases, the strategies in this guide are intended for several of these people or groups working together.

Equitable Development

Traditional economic redevelopment approaches typically focus on economic factors and job growth that targets a single site or sector and contributes to a community's tax revenue. In contrast, ***sustainable, smart growth, and equitable redevelopment*** place greater emphasis on identifying and meeting broader community needs through the redevelopment process. The concept of **equitable development** affirms that all community members should have the opportunity to participate in and benefit from development and land use decisions affecting their neighborhoods. This means that overall investments and resources are spent fairly and benefit everyone fairly, regardless of race, ethnicity, or income level.

Petroleum Brownfield Redevelopment Considerations on Tribal Lands

Many tribal and non-tribal communities have created effective strategies and practices for redeveloping petroleum brownfield sites. However, tribes have unique conditions that decision-makers must take into consideration when selecting strategies or deciding how to use them:

- Many tribal lands are held in trust by the U.S. Bureau of Indian Affairs (BIA), giving BIA a role in development decisions that adds extra steps to the process. In most cases, BIA must approve leasehold agreements and environmental assessments to enable development and attract financing.
- Most tribes have limited access to capital, and the legal nature of lands held in trust can create barriers to accessing development financing to provide supportive infrastructure, such as transportation, power, water, and sewage.
- Decision-making processes can be complicated by long-held family land assignments, religious and cultural values, and limited tribal land use options and development policies.
- Tribes have sovereign status. Tribes need partnerships to redevelop petroleum brownfields, but these partnerships must account for the tribes' autonomy.

Zuni Pueblo has its own unique conditions to consider as well:

- The pueblo has assigned development rights for two of its petroleum brownfield sites and many of the surrounding parcels to tribal members. Non-tribal business owners and developers may develop assigned land under lease from the tribe with approval from BIA, but lease terms are negotiated on a case-by-case basis with the tribal member who holds the land assignment (the "assignee").
- Without land use or commercial codes, these lease agreements are the only legal tool currently available to control land use and business activities.
- The pueblo is located in a rural and relatively isolated context.
- Unemployment is 62 percent, according to tribal members. More than 37 percent of the Zuni

Historic Photo of Zuni Pueblo - Photo credit: Edward Curtis

Zuni Pueblo is the largest of the nineteen New Mexican Pueblos, and considered very traditional with a unique language, culture and history, resulting in part from geographic isolation. The Zuni people have farmed the Zuni River Valley in the semi-arid Colorado Plateau for thousands of years. The Zuni Pueblo is divided into 88 individual grazing allotments reflecting this historic economy. Today, approximately 10,000 Zuni members live in Zuni Village and the nearby Black Rock community. The Zuni people practice an extensive religious culture with religious activities performed every day of the year. In addition, the Zuni Pueblo contains many sacred places, including the Middle Village, site of the historic Pueblo, and the surrounding historic district. Zuni Pueblo has sovereign status, self-governed by a governor, lieutenant governor and a six member Tribal Council, and administers a range of programs providing housing, environmental protection, planning, health services, and economic development.

Pueblo's population lives below the federal poverty level, according to 2006 – 2010 U.S. Census Bureau data.

- A significant housing shortage shapes Zuni economic development and family life. According to the Zuni Housing Authority, there is a 40 percent shortfall in the number of homes and apartments Zuni Pueblo residents need, and 22 percent of the population lives in what Zuni officials consider to be overcrowded conditions.

Petroleum Brownfield Sites within the Zuni Pueblo

The Zuni Pueblo has three petroleum brownfields sites, shown in Figure 1, that it has identified as candidates to catalyze redevelopment because of their locations:

- The Black Rock Airport hangar site is managed by the Zuni Tribal Government. The small airport and hangar site is located in the middle of a residential neighborhood that includes several small commercial businesses and an adjacent hospital. This site may or may not remain an airport in the future, but even if the runway continues to be operational, the area around the old hangar could be redeveloped to address multiple community needs.
- The former Malco and Chevron sites, both previously operated as gas stations, are managed by land assignees. The location of these two sites along New Mexico Highway 53, approximately one-half to one mile east-northeast of Middle Village, offers a strategic opportunity to promote a mix of commercial and related uses around a walkable "mainstreet" context. The Malco site has been cleaned up and a "No Further Action" letter was issued in April 2012 from the State of New Mexico.

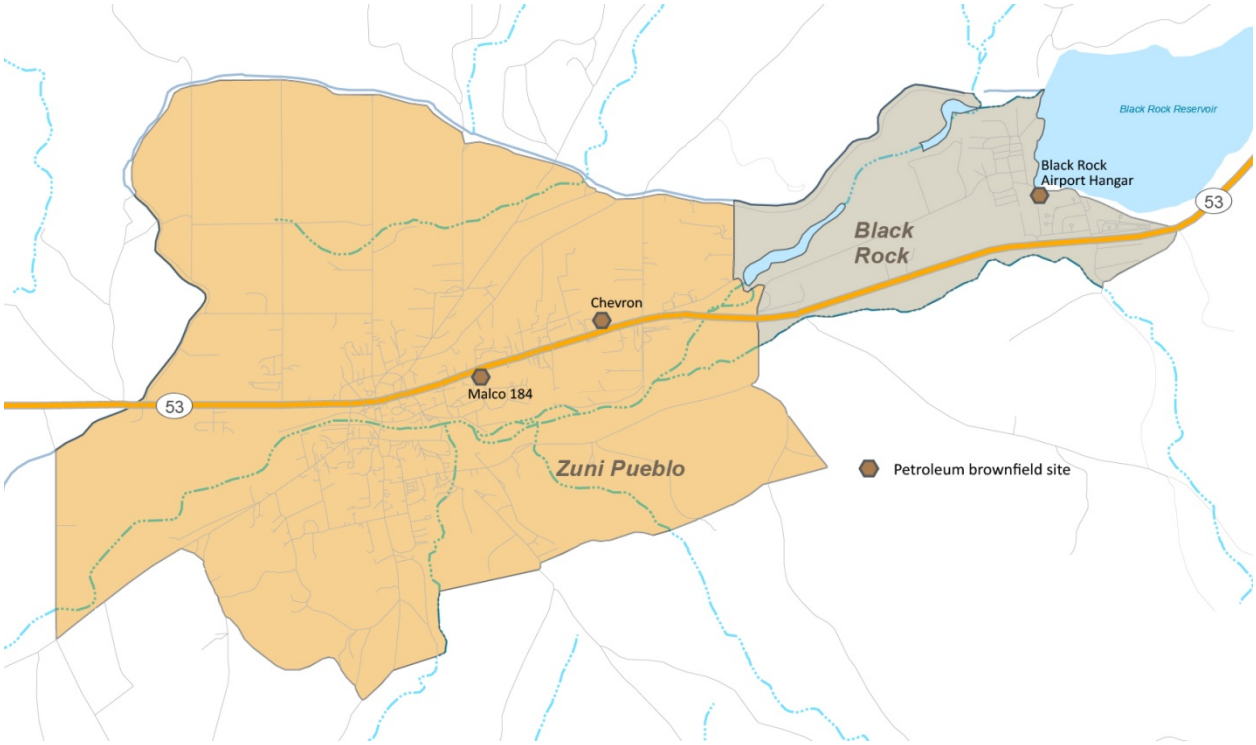


Figure 1. Locations of the selected petroleum brownfield sites within Zuni Pueblo.

The three Zuni Pueblo petroleum brownfield sites are good candidates for redevelopment, including the former Malco station (left), former Chevron station (center), and Black Rock Airport (right).
Photo credit: Skeo Solutions

Guide Overview

In light of specific Zuni Pueblo community conditions and the challenges of developing on tribal lands, this guide provides a menu of strategies and resources to support petroleum brownfield redevelopment as a catalyst for equitable and sustainable neighborhood revitalization. The guide is organized around seven steps that build on each other and work together to support long-term success in reaching the tribe's redevelopment goals. The last section of the guide provides a list of additional resources for each step. These steps are:

Zuni Oven - Photo credit: John Foster

1. **Build partnerships** – Create more effective working relationships with all of the people and organizations that can help develop, guide, and implement the redevelopment vision.
2. **Engage the community in building a vision** – Create a plan to engage tribal members, business owners, and others in crafting a community vision based on their needs and values, as well as market realities.
3. **Begin building economic capacity** – Adopt economic development strategies that implement the community vision and increase the community's wealth while achieving long-term economic and environmental health.
4. **Develop an area-wide redevelopment plan** – Develop a specific, implementation-oriented plan to build strong, economically stable neighborhoods surrounding the identified sites.
5. **Adopt development policies** – Turn the challenges associated with contaminated site redevelopment into opportunities to adopt land use and development policies that will support the achievement of development goals over time.
6. **Remediate contaminated sites** – Assess environmental contamination at petroleum brownfield sites, then plan for and implement clean-up remedies that are appropriate for the desired future uses.
7. **Secure redevelopment funding** – Work with partners to secure funding for each of these redevelopment steps and the final site development.

While these strategies are presented in a specific order in Figure 2, communities can start with the steps and strategies most relevant to their current circumstances. The steps can be rearranged or overlapped to respond to the community context, including work that has already been done, existing site conditions, funding opportunities, and the timing of other community projects. Some steps may need to be repeated or revisited throughout the process. For instance, the community might need to add new partnerships over the course of redevelopment and build economic capacity as an ongoing process. All steps are intended to build on each other, and outcomes from several or all of the steps can be combined into a single revitalization plan.

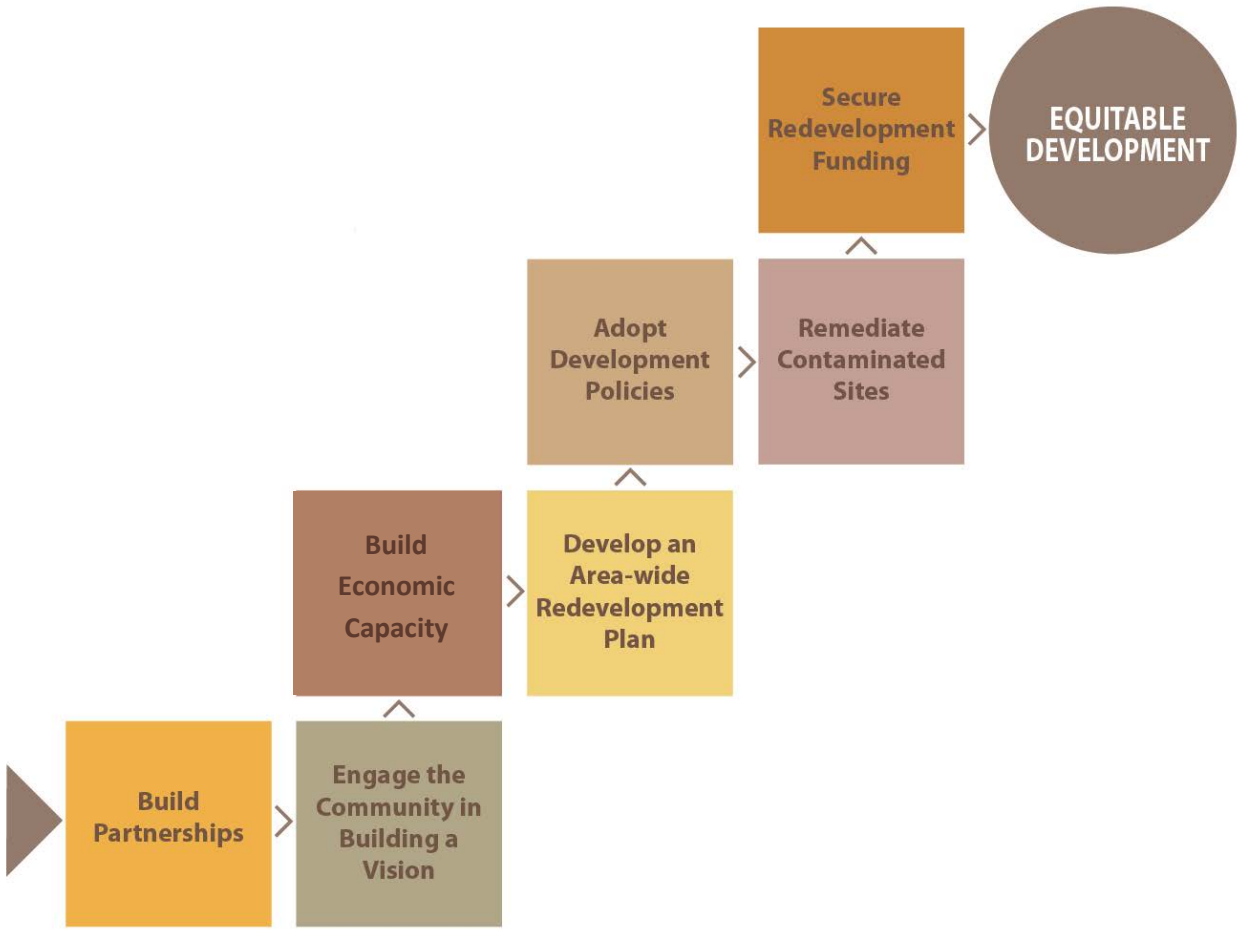


Figure 2. This guide is organized around seven steps in the community revitalization process.

1 Build Partnerships

A key step in the redevelopment process includes building the partnerships necessary to develop and implement the revitalization vision. Because tribes are sovereign entities, community redevelopment partnerships on tribal lands should reflect their autonomy. At the same time, partnerships may need to include parties, such as the Bureau of Indian Affairs (BIA), that have an approval role in some redevelopment decisions.

Why Include This Step?

Successful redevelopment requires the expertise, authority, and commitment of many different groups:

1. Residents know how well the community meets their everyday and long-term needs. They have a right to understand and weigh in on how changes will affect them.
2. Land owners and assignees have the power to determine whether and how to redevelop their property. The condition of surrounding properties can affect the value and potential uses of their land, so they have an interest in those properties as well.
3. Business owners care about community assets that impact their business, such as infrastructure, co-location of compatible businesses, and access to credit, labor, and customers.
4. Tribal agencies oversee a range of programs that help to shape neighborhoods. Many programs that seek to improve environmental and economic health can benefit from redevelopment, and might have resources to implement redevelopment plans.
5. Local, state, and federal agencies oversee diverse regulatory and funding programs that govern and help implement redevelopment plans.
6. Investors can provide critical information about the types of public investments and policies that could improve the prospects for private investment.

Engaging each of these groups early can help to ensure that plans to redevelop a site or a neighborhood take advantage of available resources. Engaged residents and landowners help maintain the long-term commitment crucial to a redevelopment project's success. Allowing them to exercise leadership and "own" the redevelopment process can increase the likelihood that plans will be implemented.

What Strategies Are Included in This Step?

Each strategy tool included in this section provides a framework through which partnerships can be organized and maintained over time. The partnership building strategies in this section include:

- Community and Public Relations Plan
- Revitalization Team
- Intra- and Intergovernmental Working Groups
- Public-Private Partnerships

Key Point: As the process moves from vision to plan to implementation, a variety of partners are called on to play more active roles, with some critical partners engaged throughout.

Build Partnerships: Community and Public Relations Plan

Community Need

The Zuni Tribal Government successfully engages residents in important community decisions, but there have been few opportunities to undertake a large-scale public relations process to develop a vision for future land use and development. Throughout the planning process, the public can play an important role in defining needs, shaping priorities, and implementing a redevelopment vision that better suits the overall community.

Description

A Community and Public Relations Plan is a formal plan on how best to engage the public in planning and project decision making. The plan may be specific to a particular project or may set policy for a broad range of activities that would benefit from public involvement.

Elements of a Community and Public Relations Plan include:

- Public involvement goals.
- Geographic scope of outreach.
- Communication venues and outlets that do not rely on an audience's literacy, such as announcements at sporting events or radio broadcast in the Zuni language.
- Project schedule with communication and public involvement timeframes.
- Major opportunities for public participation, such as workshops.
- Ongoing structures for public participation, such as advisory committees.

Key Resource

- Crafting an Effective Plan for Public Participation (Center for Land Use Education, 2004)

Benefits

A Community and Public Relations Plan can help establish shared understanding regarding the role of public involvement in a planning process. A public relations portion of the plan can:

- Give community stakeholders realistic expectations regarding the kinds of involvement opportunities and level of influence they can have.
- Send a strong signal to project staff that the public is an important audience for and judge of their work.

Case Example: Public Participation Guidelines

The City of Raleigh, North Carolina's public involvement program defines varying levels of involvement appropriate to different projects:

- *Outreach*: "Provide citizens with timely and objective information to understand the problem, alternatives, consequences, and proposed actions."
- *Information exchange*: "Exchange data and opinions with citizens to identify the problems and alternatives, describe the consequences, and develop proposed actions."
- *Feedback and consultation*: "Consult with the public throughout the planning, design, and development process to ensure citizens' concerns, aspirations, and advice are considered."
- *Consensus seeking*: "Partner with the public in each aspect of the planning, design, and development process to identify and analyze various options, recommend creative solutions, and find common ground among competing points of view."

The program also offers guidance on how to select the most suitable approach.

Source: Public Participation Guidelines for Park Planning, (p. 5, City of Raleigh, 2012)

Build Partnerships: Revitalization Team

Community Need

A community-led, neighborhood-scale redevelopment with multiple public and private partners is new to the Zuni Pueblo. While the Tribal Council sets land use priorities and the planning staff have appropriate authority to lead tribal development projects, they all can enhance the revitalization planning process by utilizing a multi-disciplinary approach as new challenges arise.

Description

A revitalization team is a collaboration of public and private parties, including elected officials, various tribal agency staff, citizens, and others. Together, they develop a shared vision and commitment to the redevelopment of a property, neighborhood, or community. The diverse expertise of the members allows the team to solve interdisciplinary problems, address environmental justice issues, and adapt revitalization to changing circumstances.

The revitalization team can be an officially appointed working group that makes formal recommendations or a less formal group that meets when needed for advice. It can be large or limited to just a handful of individuals who can see the project through from start to finish. A strong redevelopment team commits to a collaborative approach that incorporates different perspectives and reinforces the goals of an equitable revitalization process.

Key Resource

Learn about revitalization coalition successes highlighted in the report:

- Voices from Forgotten Cities: Innovative Revitalization Coalitions in America's Older Small Cities (Hoyt and Leroux, 2007)

Benefits

- Including the public on a revitalization team can foster community ownership of a planning or redevelopment process.
- By convening meetings, members of the revitalization team can strengthen cross-sector relationships, bring in resources and expertise, and build momentum for project implementation.
- Where the revitalization team is guiding area-wide revitalization, team members can coordinate efforts across multiple sites to support community-oriented services and amenities at lower costs.

Case Example: Columbia City Revitalization Committee

In 1995, Columbia City, a historic business district in Seattle, Washington, had a high vacancy rate, and businesses were struggling. To revitalize this beloved place, a group of local neighbors and business owners formed the Columbia City Revitalization Committee.

The committee started with a breakfast meeting, in which 150 attendees offered revitalization project ideas and formed discussion groups. Teams emerged from the discussion groups, initiating projects such as street cleanups, mural installations, and development of a multi-cultural performing arts center.

Slowly, success by success, the committee attracted positive attention, and its projects became the primary catalyst for additional private investment in the district.

Source: Seattle's Columbia City *(*Asset-Based Community Development Institute, 2009)

Build Partnerships: Intra- and Intergovernmental Working Groups

Community Need

The complexities of land ownership and development approvals on the Zuni Pueblo magnify the need for coordination among public agencies, which is an issue for any community pursuing redevelopment.

Description

Intragovernmental (meaning among Zuni agencies) and intergovernmental (meaning between the Zuni Pueblo and federal and state governments) working groups bring together representatives from a variety of agencies potentially involved in the revitalization process.

- An intragovernmental working group would typically meet from the earliest planning stages through adoption of implementing policies and possibly throughout implementation. Membership in the group might change over time, depending on the issues in play.
- An intergovernmental working group has a work plan that identifies opportunities for funding and technical assistance and assures that all state and federal regulatory requirements are met without unnecessary delays or costly duplication of effort. This group might meet regularly for shorter periods, for instance, to develop a process for streamlining environmental approvals or to identify issues to be addressed in a reuse plan. Members may be selected based on the ability to offer regulatory, technical or funding expertise.

Key Resource

- Unlocking Brownfields: Keys to Community Revitalization (p. 115, National Association of Local Government Environmental Professionals, 2004).

Benefits

An important benefit of intra- and intergovernmental working groups is to save time and avoid duplication of effort. When actions and plans require discussion and sign-off by different agencies, these working groups can quickly answer questions and solve problems that might otherwise take weeks. Other benefits include:

- Identifying problems. Specialists from different agencies can call attention to potential issues of which project leaders might not be aware.
- Identifying new resources. Each agency knows about programs that could support redevelopment plans in new ways.
- Building buy-in from other agencies. Just as citizen buy-in is important, buy-in by other government officials can help when collaboration is important.

Zuni Environmental Protection Program's representative discusses petroleum brownfield redevelopment with EPA staff at one of the Zuni Pueblo cleanup sites. Tribal and other environmental agencies are important to involve in the redevelopment process to take advantage of all available resources and ensure the cleanup aligns with the property's proposed future use.

Photo credit: Skeo Solutions

Build Partnerships: Public-Private Partnerships

Community Need

The relationship between the Zuni Pueblo and the private sector is complicated. Zuni sovereignty gives the tribe authority over what happens on Tribal lands and they eagerly seek new investments, but the pueblo has not been in a position to negotiate for stronger returns from development of tribal lands. Public-private partnerships can establish effective relationships with current and potential business owners and investors to ensure that community residents and investors can benefit from redevelopment efforts.

Description

Public-private partnerships often focus on specific projects, using private money to achieve public goals while making a profit for investors. Public-private partnerships are essential to the success of many state and federal programs in which local government uses funding to support redevelopment and cleanup efforts in partnership with developers.

To ensure that business owners and developers can provide expertise throughout the redevelopment process, public-private partnerships should begin early in the planning process. This type of partnership can also help identify and build businesses with interests that align well with community goals, such as a builder who wants to train new workers in green building techniques or a tribal enterprise to provide essential business services to the community.

Key Resource

The Southwest Native Green Fund is a public-private partnership offering philanthropic funding for green tribal infrastructure programs.

Benefits

- Partnerships with the private sector can lead to new sources of funding, whether by adding funds to grants or creating funding streams to repay loans.
- Coordinating public and private investments helps to achieve community goals by identifying mutual interests and relative strengths, allowing each party to do what they do best.
- Approaching redevelopment through a public-private partnership can lead to more mutually acceptable environmental protections, land use rules, and economic development outcomes.

Case Example: Urban Oaks Organic Farm

When Elmo Aiudi's original plans for a new business at an abandoned nursery fell through, the city of New Britain, Connecticut, introduced him to two organic farmers who had been displaced by development. In return for long-term use of the property, which sits in the middle of the city's Neighborhood Revitalization Zone, the farmers agreed to pay the property taxes and utilities and give Mr. Aiudi a weekly share of their produce.

The city worked in partnership with the farmers and Mr. Aiudi, assembling funding for site assessment and cleanup, while one of the farmers led an effort to clear the site of brush and debris. Additional cleanup and redevelopment investments have resulted in a productive farm and educational center in the heart of a long-neglected urban neighborhood.

Source: Reuse: Creating Community-Based Redevelopment Strategies (p. 82, American Planning Association, undated)

2 Engage the Community in Building a Vision

This step in the process includes assessing needs and engaging the community in forming a revitalization vision for the petroleum brownfield sites and surrounding area. While the Zuni Pueblo has identified specific sites for cleanup, there is currently no land use plan to guide future use for these sites. Connecting the future use of individual sites to the community's broader revitalization goals and understanding the impacts of reuse on quality of life, the economy, and the environment can improve the outcomes of redevelopment investments. Only the members of the tribal community can decide how redevelopment will best serve the community's unique needs, aspirations, culture, and circumstances. This section allows the public and other stakeholders to understand the trade-offs that go with different redevelopment scenarios.

Why Include This Step?

Community members have tremendous wisdom about the place where they live and work. Community visioning processes ask participants to think about what their community will look like in the future, providing a place for residents and planning professionals to exchange insights, information, and ideas. Visioning processes also help to organize and prioritize community needs, ensuring that public and private investments serve the current population while laying the foundation for future growth and development.

A visioning process can cover the entire pueblo community or a smaller neighborhood. All participants should be clear about the geography covered and the scope of changes under consideration. Maps are useful in communicating both the geography and the relationships among places, while a simple list of questions to be answered can help keep organizers and participants working toward the same goals. In the context of the Zuni Pueblo's redevelopment priorities, guiding questions might include:

- What do we value most about our community? How can we preserve what we value?
- What do we want our economic development investments to achieve?
- What types of places do we need? Who will use them?
- Are there cultural values and stories we want to emphasize in our natural and the built environment?

What Strategies Are Included in This Step?

The following strategy tools used in this step provide a foundation to help communities make informed choices about a vision for the future and strategies to achieve that vision:

- Community Needs Assessment
- Community Wealth Assessment
- Market Study of Assets and Needs
- SWOT Analysis
- Scenario Planning and Concept Plan
- Conflict Resolution Techniques

Key Point: The goal of a visioning process is to identify common values and interests and, along the way, uncover points of disagreement and conflict. Later steps in the redevelopment process build on the common values and include methods to resolve or mediate disagreements.

Build a Vision: Community Needs Assessment

Community Need

As a relatively small, close-knit community, Zuni tribal members may already have a common understanding of their neighbors' most important needs. However, the community needs assessment is still an important tool to check assumptions and frame thinking about how redevelopment can meet those needs.

Description

A Community Needs Assessment (CNA) collects and analyzes the community's self-identified needs and quality of life priorities.

A CNA includes the following basic steps:

- Gather information from community members, using techniques such as individual interviews, focus groups or surveys.
- Gather data from other sources, such as the U.S. Census or from various tribal agencies.
- Present data to the public, with a preliminary analysis to summarize findings.
- Use a public review process to refine findings and establish priorities.

Public review of the CNA can stimulate public interest in the visioning process. The CNA can identify and recruit stakeholders who want to or need to play a larger role in the project.

Key Resource

- A Community Needs Assessment Guide: A Brief Guide on How to Conduct a Needs Assessment (Loyola University Chicago, 2000)

Benefits

- This information can be used to initiate a public conversation about the community, common needs, and how to meet them. The revitalization team can use identified needs to explain how the redevelopment process is relevant to the entire community.
- The results of the CNA should lead to guiding principles that the community can refer to over the course of the project to ensure the project is addressing community needs.

Thriving Community Characteristics

A CNA can cover a wide range of issues or can focus on one particular quality of life issue in depth. The following characteristics make up a sample list of essential ingredients for supporting thriving communities and may offer a starting place for identifying and prioritizing community needs.

- Clean air and water and limited exposure to toxins.
- Meaningful and fair employment.
- Business development opportunities.
- Access to financial capital.
- Access to affordable health care.
- Fresh, healthy, and affordable food.
- Access to clean, safe, and affordable housing.
- Safe and reliable infrastructure (communications, transportation, and water).
- Access to a range of education opportunities.
- Sufficient open space and recreation.
- Arts, cultural, religious, and social networks.
- Opportunities for social and civic engagement.
- Minimal waste and efficient energy use.

These characteristics have been adapted from the ICLEI-STAR Community Index, Rocky Mountain Institute's Economic Renewal training, and PolicyLink.

Build a Vision: Community Wealth Assessment

Community Need

Traditional economic development strategies focus on bringing jobs, services, and investment into a community from somewhere else, but wealth assessments should also recognize other community attributes. Recognizing the Zuni community's cultural, social, and environmental assets as wealth allows the tribe to develop strategies and identify investments that build on those strengths.

Description

A Community Wealth Assessment (CWA) identifies community assets and points to strategies that will develop assets as economic resources.

A CWA identifies existing forms of community wealth that may have been overlooked. It can be helpful to enlist expertise from outside a community to give residents a new perspective on what they already know. The outcomes of the assessment can inform an environmentally sustainable, locally controlled economic development strategy.

The CWA is a complement to a Community Needs Assessment. Taken together, the information in the two reports can be used to identify new opportunities through additional analysis.

Key Resource

The Ford Foundation funded development of a wealth measurement tool that evaluates a project's success in generating multiple forms of wealth. The measurement system defines objectives for wealth creation, sets the baseline, and establishes measures to assess progress. More information is available at the Wealth Creation in Rural Communities website.

Benefits

- A CWA recognizes that economic development initiatives that create locally controlled assets are the most successful in generating long-term community resilience.
- Building on existing community wealth is respectful of prior community efforts.
- Identifying ways to grow multiple forms of community wealth through revitalization projects shifts the focus from simply improving economic conditions to achieving regional prosperity inclusive of all forms of wealth.

Seven Forms of Community Wealth

A Community Wealth Assessment examines each of the following seven forms of wealth:

- Financial capital is the stock of unencumbered monetary assets that can be invested.
- Natural capital is the stock of unimpaired environmental assets (e.g., air, water, and land).
- Social capital is the stock of trust, relationships, and networks that support civil society.
- Individual capital is the stock of skills and physical or mental health of a community.
- Built capital is the stock of fully functioning infrastructure or built assets.
- Intellectual capital is the stock of knowledge, innovation, creativity or imagination in a region.
- Political capital is the stock of power and goodwill held by individuals and groups that can achieve desired ends.

Source: Creating Rural Wealth: An Overview, (p. 4, Yellow Wood Associates, undated)

Build a Vision: Market Study of Assets and Needs

Community Need

The economic development and redevelopment opportunities on the Zuni Pueblo are related to national and local market conditions. Quantifiable information about opportunities and constraints will help the community select realistic options and could reveal surprising strengths.

Description

A market study conducted in support of a visioning process would ask questions designed to understand the market strengths of the entire Zuni Pueblo, including its assets, its relative strengths compared to neighboring communities, and the spending patterns of current residents and potential visitors.

A market study complements a Community Needs and Community Wealth Assessment by focusing on financial resources and economic opportunities that can support community goals. Questions a market study could answer include:

- How much money do residents spend? Where do they spend it? How much of it leaves the community?
- What would be needed to keep more tribal money in circulation locally?
- What business purchases could be sourced locally?
- How much money do visitors spend in Zuni Pueblo and the surrounding area? What portion of these transactions could reasonably be spent within the Zuni Pueblo?

Key Resource

Yellow Wood Associates offers guidance on how rural communities can increase prosperity based on local assets and values.

Benefits

Communities with longstanding, perceived economic weaknesses are often surprised to learn how much economic and purchasing power they actually hold. A market study lays the groundwork for additional analysis of economic "leaks," places where money is being spent outside the community and opportunities to plug those leaks by providing goods and services locally.

Market studies that identify assets and opportunities in particular neighborhoods can also identify specific changes that can enhance the value of those assets, such as improved access between a neighborhood and a key site or additional infrastructure to support a use valued by the community.

Case Example: Main Street Program

The city of Ogdensburg, New York, is using a Main Street program and a state area-wide redevelopment grant, among other resources, to revitalize its historic downtown. As they prepared a revitalization strategy, city planners undertook an economic and market trend analysis to better understand their opportunities.

The city's planning director saw that an assessment of demographic and market factors would provide a better understanding of the market potential of the study area. From that, planners could define business sectors that complement each other, thrive, meet community needs, generate living wage jobs, and even lower carbon emissions.

Ogdensburg Planning Director
Memo to City Manager, March 24, 2011

Build a Vision: SWOT Analysis

Community Need

When addressing issues like poverty and unemployment, it is easy to focus on weaknesses and needs. A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis can help community members also focus on assets and how to use them strategically to achieve economic development goals.

Description

A SWOT analysis is used in strategic planning to generate insights about internal and external factors that can influence a project's direction or viability.

A SWOT analysis begins by listing internal factors a community can control (strengths and weaknesses) and external factors over which it has less control (opportunities and threats). These lists could derive from the Community Wealth Assessment, the Community Needs Assessment, and a market study. After organizing the list into the four corners of a SWOT chart, an individual or group considers how to pair various complementary or opposing factors to generate effective strategies.

A SWOT analysis can be conducted by an individual or a small team. It can be an effective tool to guide public discussions.

Key Resource

How to conduct a SWOT Analysis:

- SWOT Analysis: Strengths, Weaknesses, Opportunities, and Threats (The Community Toolbox, 2012)

Benefits

- SWOT analysis can organize information in a way that helps to generate new ideas.
- SWOT analysis can be used to generate realistic objectives or strategies for a strategic plan, such as an economic development strategy.

Understanding SWOT Analysis

The following chart illustrates the relationship between each of the factors in a SWOT analysis.[1]

	Helpful to achieving the objective	**Harmful** to achieving the objective
Internal origin (attributes of the organization)	S	W
External origin (attributes of the environment)	O	T

Strategies can be generated by considering interactions between the factors.[2]

	Strengths	**Weaknesses**
Opportunities	Strategies that use strengths to take advantage of opportunities.	Strategies that shore up weaknesses to take advantage of opportunities.
Threats	Strategies that use strengths to address threats.	Strategies that shore up weaknesses to address threats.

[1] Chart adapted from the city of Rockville, Maryland, Strategic Plan Development website (2012).
[2] Chart adapted from SWOT Analysis: Strengths, Weaknesses, Opportunities, and Threats (The Community Toolbox, 2012).

Build a Vision: Scenario Planning and Concept Plan

Community Need

Without a current land use plan to guide future use of petroleum brownfield sites, Zuni Pueblo members might find it helpful to consider multiple development scenarios that lay out the impacts, costs, and benefits of different land use strategies.

Description

Scenario planning allows stakeholders to examine different ways to achieve community goals through land development. Comparing different scenarios or concepts shows the trade-offs of different choices and allows a comparison of the costs and benefits of each.

For instance, two concept plans for the Zuni Airport hangar site might show different ways to arrange 100 homes. One concept might show 100 single family homes on identical lots, with one long central street. Another concept might include homes and apartments organized around a street grid designed to improve pedestrian access to businesses and schools. Stakeholders could then compare costs and benefits.

The choices made based on the scenarios could be used to draft a final concept plan, which would illustrate the tribe's vision and inform future private and public decisions. This concept plan could be codified in a district land use plan or site reuse plan both outlined as strategies in later steps.

Key Resource

- *Opening Access to Scenario Planning Tools* (Lincoln Institute of Land Policy, 2012)

Benefits

- Scenario planning gives stakeholders the opportunity to think more concretely about how land use choices shape the community's future.
- Scenario planning and the resulting concept plan increase confidence in planning work by communicating clearly to a variety of audiences.
- A concept plan guides future choices without legislating them, making it an excellent strategy for the Zuni Pueblo, which does not currently use zoning.
- If zoning is considered in the future, the concept plan lays the groundwork for definitions and locations of different uses.

Case Example: Bellevue, Washington

Planners used these maps of different build-out alternatives around a new light rail line in Bellevue, Washington, to analyze how different choices would change costs and affect surrounding neighborhoods. A number of online open-source and low-cost software programs are available to assist with scenario mapping and analysis.

Source: Policy Focus Report (p. 32, Lincoln Institute of Land Policy, 2012)

Build a Vision: Conflict Resolution Techniques

Community Need

In many communities, different opinions about land use and community development goals often end in stalemates that block any action. The strong emphasis on achieving consensus in the Zuni Pueblo system of government may make this typical stalemate problem even more challenging if conflicts are left unresolved in order to avoid divisiveness.

Description

Conflict resolution—also called Alternative Dispute Resolution (ADR)—consists of techniques that guide people or organizations through conflict and toward resolution using creative problem-solving and communication strategies, often with the assistance of a neutral third party. ADR is an alternative to formal (court-based) litigation in cases of serious disagreement; however, ADR techniques are often also used to find areas of common ground in less litigious settings, such as a visioning process.

Examples of ADR techniques include:

- Facilitation.
- Interest-based problem solving.
- Fact finding.
- Negotiation.
- Mediation.

ADR is typically a voluntary process beginning with the decision to participate all the way through to agreement on a resolution.

Key Resource

- Alternative Dispute Resolution: A Resource Guide (U.S. Office of Personnel Management, 2012)

Benefits

- Learning ADR techniques can improve a community's internal capacity for open communication and shared solutions development.
- When appropriate, ADR can be directed by a neutral third party who can help opposing parties find common ground.
- ADR acknowledges conflict without placing blame or creating stigma. Instead, by addressing conflict directly, it opens up space for new possibilities and solutions to emerge.
- Conflict resolution techniques can use disagreement and conflict to uncover mutual interests and develop better solutions.

Interests Versus Positions

Conflict Resolution techniques emphasize identifying interests, or the essential values, behind the positions opposing parties hold.

For example, a stakeholder might state a desire to see a petroleum brownfield site redeveloped with a gas station. A discussion focused on values, rather than positions (or solutions), may reveal that the stakeholder's interest is in increasing jobs and dollars in the community. Focusing on this value of wealth creation can open up many options for meeting this interest, some of which may meet multiple stakeholder goals and therefore have more consensus than others.

Emphasizing interests over positions helps to identify areas of common ground between parties with seemingly conflicting stances on an issue. Once shared interests are identified, parties can work toward a mutually beneficial solution.

Case Study: Ohkay Owingeh's Planning Process

In 2001, Ohkay Owingeh, 35 miles north of Santa Fe, New Mexico, created its pueblo-wide Master Land Use Plan that encompassed all 5,800 square miles of Rio Arriba County. The first project implemented under the Ohkay Owingeh Master Land Use Plan was Tsigo Bugeh Village, a complex of 40 affordable townhouses arranged around two plazas. The development was inspired by the original pueblo community design and includes a meeting space, playground, computer room, fitness room, and business center.

Prior to the project, Ohkay Owingeh relied on tract housing on scattered-site lots that did not reflect the tribe's sense of place; it was also available only to low-income members. Due to limited financing, very few housing units could be produced, and waiting lists for housing grew as poverty rates continued to rise.

Ohkay Owingeh's Tsigo Bugeh Village
Photo credit: San Juan Pueblo

To correct these housing problems, the Ohkay Owingeh Housing Authority invited tribal members, elders, and tribal leaders to participate in the community visioning and planning process. This public engagement provided valuable input on community concerns, including affordability and safety, sacred geographic locations, and floor plans able to accommodate feast day rituals.

The pueblo produced a long-term growth strategy that coordinates future housing and commercial development, while preserving the community's historic plazas. A major catalyst for the Ohkay Owingeh Master Land Use Plan was the tribe's recognition that continuing to build housing away from the pueblo's center would decrease the land available to future generations for agriculture and open space. It also recognized that the tribe's infrastructure, including water and wastewater systems, was not able to keep pace with the pueblo's dispersed growth.

The Master Land Use Plan was the first tribal smart growth plan in the country and earned EPA's 2004 National Award for Smart Growth Achievement. The plan coordinates existing transportation and water infrastructure with housing and commercial development, preserves the historic plazas, and promotes "Main Street" retail and commercial development. The plan simultaneously strengthens the pueblo's identity and protects the environment by keeping with the pueblo's traditional commitment to sound environmental design.

To build Tsigo Bugeh Village, the pueblo received funding from the U.S. Department of Housing and Urban Development (HUD), as well as from state and local agencies and foundations. For the first time, HUD's HOME Investment Partnerships Program funds—federal block grants to state and local governments designed to create affordable housing for low-income households—were used for rental housing on tribal lands in New Mexico. The New Mexico Mortgage Finance Authority also provided low-cost loans.

Overall, the goal of preserving the pueblo's limited land base and environmental resources, plus the two-year community visioning process were translated into the built environment and fostered a strong sense of place for the community.

3 Build Economic Capacity

This step in the process evaluates market opportunities to grow the local economy. With high poverty and unemployment rates in Zuni Pueblo, creating economic opportunities and jobs would be a natural focus for redevelopment. As in many communities, lack of financial capital makes it difficult for entrepreneurs to start new businesses or strengthen existing ones. This step emphasizes building on local assets and strengthening connections between the pueblo's economy and the surrounding region.

Why Include This Step?

Economic capacity is the ability to take advantage of economic opportunities. Several different factors contribute to economic capacity. These factors include entrepreneurial activity, human labor resources, infrastructure, and the business environment.[3] Some factors, such as proximity to a major city, are out of a local government's control, but many others can be changed by the community acting on its own or in concert with partners.

Economic capacity building is distinct from other economic strategies because it prioritizes the development of a community's inherent strengths. Similar to what is found in a Community Wealth Assessment, strengths can include people with good ideas for new businesses, skilled workers, cultural and natural resources, social networks, and geographic location. Outside investments might still be a priority for the community, but those investments are selected to respond to the community's needs and strengths rather than imposing an outside model's definition of economic success.

Local economic development is essential to both environmental justice and smart growth principles because it goes hand in hand with a community's self-determination. When it is based on community-defined assets–including environmental resources—local economic growth increases the community's power to protect their health, their environment, and their culture in the long run.

What Strategies Are Included in This Step?

The strategies in this section represent diverse approaches to developing tribal assets, including:

- Economic Gardening
- Redevelopment-Ready Site Program
- Buy-Local Program
- Strong Sense of Place

Key Point: Identify strengths and assets and then invest in preserving or enhancing them. Define assets broadly, using multiple types of community wealth to expand traditional definitions of what creates value in a community.

[3] Connell, D. and Wall, E. (August 2004). "Profiling Economic Capacity." *Journal of Extension 42:4.* Retrieved 8/31/12 from http://www.joe.org/joe/2004august/a2.php.

Build Economic Capacity: Economic Gardening

Community Need

The Zuni Pueblo seeks to improve and diversify its economy to raise quality of life for all community members. Economic gardening is a concept that supports local businesses to achieve this goal. It can help generate jobs and wealth while keeping resources in the local economy.

Description

Economic gardening is a local entrepreneur-centered economic development strategy. First put to practice in Littleton, Colorado, economic gardening emphasizes supporting and growing local entrepreneurial businesses over hunting for outside businesses through incentives.

Using this approach, local government can support entrepreneurs in multiple ways, including:

- Information: Gather and share information with local entrepreneurs, including market research, information on community development initiatives, geospatial analyses, and legislative research. Also provide capacity-building seminars on topics of interest.
- Infrastructure: Invest in infrastructure that builds quality of life, thereby encouraging entrepreneurs to stay in the community.
- Connection: Create connections between local entrepreneurs and resources, such as academic institutions and trade associations.

Key Resource

- Economic Gardening: Next Generation Applications for a Balanced Portfolio Approach to Economic Growth (Quello and Toft, 2006)

Benefits

- Economic gardening prioritizes a "bottom-up" approach that invests in local talent and assets instead of relying on outside industry for jobs.
- Public investments, such as infrastructure, support not only entrepreneurs but also the broader community, generating multiple benefits.
- Assets created through economic gardening can generate direct returns for Zuni Pueblo members, instead of to outside companies. These include increased individual, intellectual, social, built, and financial capital.

Case Example: Economic Gardening

The image above is an example of a competitor location map to determine an ideal business location. Communities can partner with universities to develop such tools to identify regional market opportunities. For instance, the Wyoming Business Council partners with the University of Wyoming to provide market data and technical assistance to small businesses to help them access, interpret, and act on market data to strengthen their business. The university's Market Research Center analyzes data and provides businesses with detailed market reports. Its Small Business Development Center can then help businesses create a business plan or secure financing.

Image Source: Chris Gibbon (City of Littleton, Colorado, Department of Economic Development, undated)

Build Economic Capacity: Redevelopment-Ready Site Program

Community Need

Developers' real and perceived difficulty in getting approvals to develop on Zuni Pueblo land can be a hurdle to centrally located redevelopment. This problem is magnified when land is readily available to develop in surrounding undeveloped tribal lands.

Description

A redevelopment-ready site program focuses resources on identifying and preparing sites for redevelopment and then actively marketing those sites to developers who might otherwise look to undeveloped–sometimes called greenfield—locations. By marketing redevelopment sites, the community could spur redevelopment of adjacent sites already served by existing adequate infrastructure and support community redevelopment priorities.

Site preparation can include environmental assessment, contaminant remediation, and obtaining permits needed for the community's preferred uses. Local agency staff and elected officials can work with potential investors and developers to understand which regulations or problems are truly significant.

Sometimes a significant barrier is a preconception about the development process that is not even true. A strong marketing strategy can dispel misconceptions, with the pueblo providing information about site size, approved uses, available infrastructure, state and federal development incentives, and other credits that may be available to developers.

Key Resource

- Redevelopment Ready Communities 2006 Best Practices and Scoring System is a Michigan Suburbs Alliance guide for local government officials establishing redevelopment best practices.

Benefits

Understanding what is preventing redevelopment can be important for agency staff and local officials as they consider new rules and investment priorities. In some cases, a regulation that everyone believes to be a problem is not.

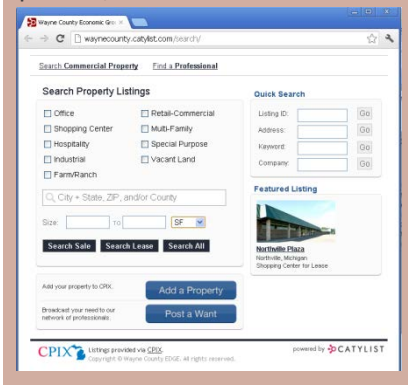
By focusing attention on key sites, redevelopment-ready programs can increase neighborhood visibility and investor confidence, accelerating redevelopment of other sites.

A redevelopment-ready marketing program can complement other activities, such as those stemming from Zuni Pueblo's participation in New Mexico MainStreet program, which could benefit the community with its staff's expertise.

Case Example: Redevelopment-Ready Sites

In order to compete more effectively with sprawling greenfield sites, Wayne County, Michigan, maintains a list of prime development-ready sites that it markets to developers.

In addition, the county partners with the state to provide a searchable database of the sites. This database can be searched by property type, size, and location. For each site, the database provides information regarding the property location, size and type, sales price and terms, building size, a picture, and realtor contact information.



Source: Wayne County EDGE, (Economic Development Growth Engine, 2012)

Build Economic Capacity: Buy-Local Program

Community Need

With larger markets in nearby Gallup, New Mexico, and limited goods and services available within Zuni Pueblo, residents inevitably spend more of their money outside the pueblo. This money is an important resource that could be kept inside the pueblo.

Description

A buy-local program promotes local purchases and strengthens the local economy because of the multiplier effect, in which a proportion of money spent at a local business will in turn be re-invested in the local community rather than be exported elsewhere. A Buy-Local Program compliments an economic gardening approach to grow local assets.

This strategy can build on market study findings by offering programs and resources to promote local purchases and reduce the amount of money leaking out of the community. In addition to marketing efforts, a community can amplify local buying benefits by analyzing spending and filling gaps in the local market. Questions to ask include:

- What goods and services are bought outside the local economy?
- Do local businesses supply goods and services within the community?
- Is there a demand for new local businesses?
- What support do existing businesses and entrepreneurs need?

With opportunities identified, the community can then develop buy-local incentives and outreach programs.

Key Resource

- The Economics of Buy Local Initiatives (Mississippi State University Extension Service, 2010)

Benefits

- A buy-local program can build a variety of different types of capital, including social, cultural, and financial capital.
- Increasing local purchases can encourage entrepreneurs to turn their skills and ideas into new local businesses.
- Even a small increase in the percent of resident's money spent within the pueblo can have a big economic impact.

Case Example: Twice is Nice

Honeoye Falls is a small village in upstate New York. At only 2.6 square miles and 845 residents, it is a small local economy. To keep money circulating locally, the town adopted a voluntary program called Twice is Nice. The program encourages residents to shop at local stores at least twice a month. Twice is Nice has built pride in the community, especially among the local businesses. The village center is walkable and has a concentration of businesses, making the increased business activity more visible to residents. The program is now self-funded, with each participating business paying a quarterly membership fee of $100. Twice is Nice is successful because of its commitment to supporting local businesses, which also encourages new businesses to set up shop in Honeoye Falls.

Source: Twice is Nice Buy Local Program (Green Project Exchange, undated)

Build Economic Capacity: Strong Sense of Place

Community Need

Establishing a sense of place can boost any economic redevelopment strategy. For example, many Zuni Pueblo members wish to take advantage of its unique sense of place to draw in tourism. Doing so creates unique challenges. Some of the most important places on the Zuni Pueblo are deliberately hidden from outsiders. Tribal members and outsiders might have very different ideas about what makes the pueblo special. Planners and designers need to work closely with residents to respect Zuni values.

Benefits

- Determining a neighborhood's sense of place helps residents to protect it and ensure that new development strengthens it.
- A sense of place grows from peoples' positive experiences in it. Enhancing the sense of place by improving an underutilized space or a corridor can improve their experiences.
- Understanding the differences between a place that residents want to use and a place for visitors could focus efforts to increase local non-tourism economic activity.

Description

A community's sense of place can be an important economic asset that gives residents and visitors alike a reason to linger and return, spurring economic activity, and strengthening social connections.

There are many ways to create or preserve a sense of place:

- Identify and highlight important places, public events, and natural features. A community wealth assessment helps do this.
- Enhance existing or new public spaces to meet community needs.
- Incorporate history in new projects, such as including an historic Zuni "waffle" garden in a new park to promote healthy eating.
- Work with business development organizations, such as the New Mexico MainStreet Program, to jointly reinforce a distinct identity.

Key Resource

- Community Culture and the Environment (EPA, 2002) provides detailed steps for identifying sense of place in your town.

Case Example: Vienna, Maryland

Fewer than 300 people lived in the town of Vienna when they began a community visioning process in 2002. Nestled on one of the inlets flowing into the Chesapeake Bay, Vienna had about 140 homes surrounded by farms and wetlands. New development threatened the town's heritage and character, so the town developed a vision for future growth that protects and benefits the town's historic buildings, natural setting, and working landscapes. Their vision document identifies community assets to preserve and neighborhoods to redevelop.

The town used the vision as the basis for its 2003 Comprehensive Plan, which helped focus redevelopment efforts on specific investments linking the downtown to the waterfront, as well as market Vienna as one of a network of Chesapeake Bay Gateways. The town adopted conservation zoning, which helped persuade the state to purchase and preserve a 276-acre greenbelt buffer south of town.

Sources: Vienna Community Vision Plan (The Conservation Fund, 2003) and the Town of Vienna website

4 Develop an Area-Wide Redevelopment Plan

An area-wide redevelopment plan guides tribal infrastructure improvements and land use development, including brownfield sites and related properties. The three identified Zuni Pueblo petroleum brownfield sites offer different redevelopment opportunities based on their locations and management authorities. The Black Rock Airport hangar site is managed by the Zuni Tribal Government and is located near residential neighborhoods. The former Malco and Chevron sites are managed by tribal land assignees and located within a newly designated main street program corridor. The New Mexico MainStreet program promotes local business development and historic preservation. An area-wide redevelopment plan helps the pueblo consider how these sites relate to, enhance, and support surrounding land uses, infrastructure, cultural values, and natural features.

Why Include This Step?

Area-wide planning is an approach to revitalizing petroleum brownfields and other vacant properties that considers individual properties in the context of the surrounding neighborhood. Rather than making decisions about a property in isolation, the community comes together to consider its vision and the needs of the surrounding area, the best uses for contaminated properties, and the types of improvements that might make each site more attractive for redevelopment. An area-wide plan can include specific strategies for using a variety of resources to achieve neighborhood improvement, economic development, and other goals. By using the plan, the pueblo can increase reuse of existing infrastructure, better protect human health by cleaning up polluted sites, and increase the neighborhood's economic vitality.

This approach brings together people and groups with an interest in the property, including the property owner, tribal members who might use the property, neighboring businesses and residents, state and federal officials, local planners, and investors.

Typically, the community would complete an area-wide plan after identifying petroleum brownfields sites but before it prepares site-specific reuse plans. The three Zuni Pueblo petroleum brownfield sites are in different stages of the cleanup process, but all could benefit from an area-wide plan that identifies reuse that contributes to surrounding neighborhoods. An area-wide plan could encompass the area for all three sites or a much broader area covering the entire community.

What Strategies Are Included in This Step?

This section includes the following strategies to develop an area-wide redevelopment plan:

- Site Inventory
- Infrastructure Capacity Assessment
- District Land Use Plan
- Implementation Strategy

Key Point: Area-wide plans help transform brownfields into valuable assets when reuse responds to community needs and aspirations.

Area-Wide Plan: Site Inventory

Community Need

In addition to the Black Rock Airport hangar and the former Malco and Chevron sites, there might be other sites of concern in nearby neighborhoods that could be addressed in the area-wide planning process. Identifying other brownfields sites with underground storage tanks and vacant or blighted buildings would allow the community to address multiple issues during one planning process.

Description

Site inventories capture information about vacant and underused sites that helps planners and the community understand what types of work will be needed to prepare sites for redevelopment. Information could include:

- Physical characteristics (e.g., size, environmental features, and infrastructure).
- Ownership and legal status.
- Cultural associations.
- Known contamination data.
- Long-term cleanup features such as monitoring wells.
- Former uses.

Site information could be kept in a searchable database or Geographic Information System (GIS) format and can be made available online.

A site inventory can also be used to inform a redevelopment ready sites program that highlights high priority sites for redevelopment.

Key Resource

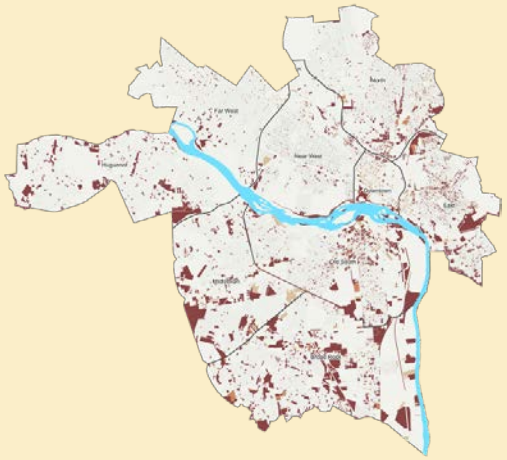
Petroleum Brownfields: Developing Inventories (EPA Office of Solid Waste and Emergency Response, 2009)

Benefits

- A comprehensive site inventory allows land use planners to track and prioritize sites for redevelopment and can facilitate marketing of key sites.
- Using a GIS tool can enhance land use analysis and allow planners to quickly identify and map sites with a range of suitable future uses.
- Surveying neighbors and other community members about the former uses of sites in the area can generate important historical data that might not be available elsewhere.

Case Example: Vacant Lands Inventory

The Richmond Green Infrastructure Assessment project created the first comprehensive dataset of vacant and underused properties in the city of Richmond, Virginia. This GIS-based inventory catalogues over 9,000 parcels and characterizes vacancy status and suitability for different types of economic development and green infrastructure. The inventory prompted better dialogue amongst different city offices on brownfields revitalization and identified parcels with potential to catalyze area-wide revitalization.



Source: Richmond Green Infrastructure Assessment (p. 6, 2010)

Area-Wide Plan: Infrastructure Capacity Assessment

Community Need

As Zuni Pueblo redevelops around the Black Rock Airport hangar and former Malco and Chevron sites, they could face significant infrastructure development costs. An area-wide infrastructure capacity evaluation of existing infrastructure can lay the groundwork for a cost-effective redevelopment plan.

Description

"Infrastructure" typically refers to physical systems including transportation, communication, water and sewer, gas lines, and electrical power. Capacity assessments can also evaluate other types of infrastructure such as emergency services and schools.

An infrastructure capacity assessment identifies infrastructure in the redevelopment area, assesses its current condition, and determines whether it is adequate for planned new uses. The assessment can be as simple as a map and list of existing facilities and their current capacity and maintenance needs.

Planners can use assessment information to understand investments needed to realize the community's vision. For instance, a site intended for a hotel and conference center may need additional water service to support a large commercial kitchen. The assessment can help prioritize public investments, modify plans, or clarify redevelopment costs.

Additionally, an assessment can illustrate cost savings of redeveloping a site with pre-existing infrastructure versus developing a greenfield where no infrastructure currently exists.

Benefits

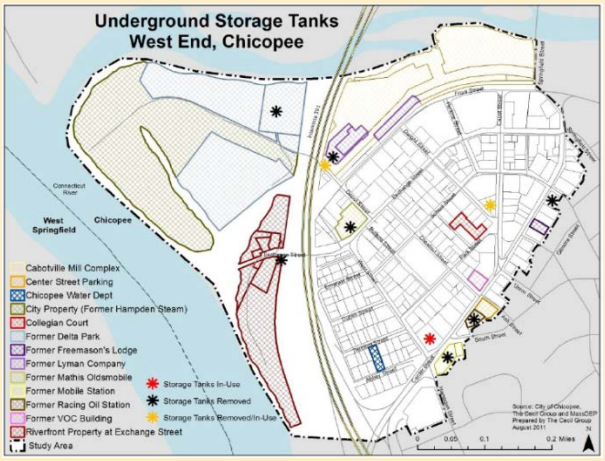
A benefit of an area-wide planning process is the ability to consider infrastructure needs for an entire redevelopment area at once:

- Location of existing infrastructure may influence the vision for reuse.
- Opportunities for cost-effective expansion or improvements might be clearer at the neighborhood level than they would be at the site level.

The infrastructure capacity assessment can be an important reality check, exposing expenses of development options up front, thereby helping the public and local officials make true-cost choices about redevelopment priorities.

Case Example: Chicopee, Massachusetts

The town of Chicopee, Massachusetts, undertook an area-wide plan for its West End neighborhood. In addition to mapping brownfields and underground storage tanks, the existing conditions report identified transit infrastructure, bikeways, parking lots, parks, historic buildings, and natural resources.



Source: Chicopee West End Brownfields Area-Wide Plan, Appendix A, (p. A7, 2012)

Area-Wide Plan: District Land Use Plan

Community Need

The lack of a comprehensive land use plan creates uncertainty about how petroleum brownfields and other types of sites relate to the larger community. This uncertainty makes it difficult to attract businesses, plan for infrastructure, and realize a community vision.

Description

In the context of an area-wide plan, a district land use plan shows how neighborhood redevelopment fits within the broader community vision. A district land use plan codifies strategic choices made in scenario planning and concept plan development. These plans define the relationships among different types of land uses desired in the neighborhood, such as neighborhood retail, multi-family housing, or education. The district land use plan can also show infrastructure needs and environmental and cultural protection areas, as well as outline any aesthetic requirements for development.

Land use plans do not have to be legally binding on landowners or assignees to be useful in prioritizing local government investments, securing funding, and communicating with the larger community. However, much of the value of a land use plan as an economic development tool comes from legislatively adopting the land use requirements to give public and private investors certainty about future use and land values.

Key Resource

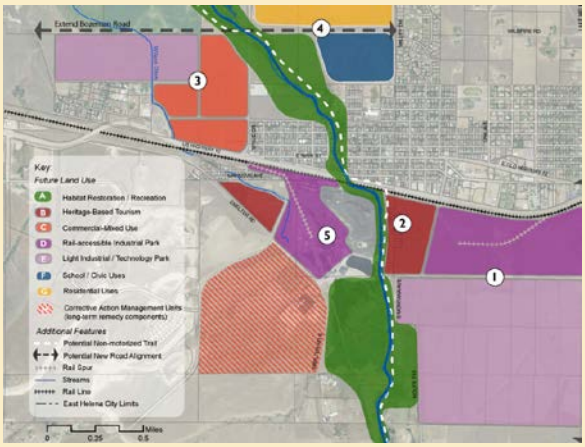
- Tribal Legal Code Project: Land Use and Planning (Tribal Law and Policy Institute, undated)

Benefits

Land use plans are an essential tool for communicating and achieving a community vision. Good land use plans and maps:

- Help residents, investors, and others understand how the different pieces of redevelopment work together to achieve a vision.
- Provide guidance for public and private decision makers and potential partners.
- Assure investors that the pueblo is committed to continuing to improve market conditions in the area.
- Demonstrate a public commitment that investments will achieve community goals.

Case Example: Land Use Plan



The small, rural town of East Helena, Montana, has suffered economically due in part to wide-spread contaminated and underused land. With EPA assistance, community stakeholders came together to develop a shared vision to preserve cultural heritage, protect natural assets, promote economic development, and guide cleanup efforts. The resulting land use plan is being used to prioritize investments, secure funding, and coordinate implementation.

Source: East Helena Community Planning Charrette (Skeo Solutions, undated)

Area-Wide Plan: Implementation Strategy

Community Need

Neighborhood-scale redevelopment efforts are always complex, involving multiple land owners and public- and private-sector investments, often over many years. Petroleum brownfield sites add another level of complexity, requiring a series of assessment and cleanup steps that must be coordinated with other redevelopment activities. On tribal lands, issues of land ownership and control make the process even more complex.

Description

An implementation strategy is designed to keep brownfield cleanup and area-wide revitalization moving by clarifying priorities, highlighting where additional effort might be needed, and coordinating various actors' roles. It includes:

- Site-specific considerations and cleanup needs.
- A prioritized list of the actions needed to achieve the community's vision, including neighborhood revitalization tasks, as well as petroleum brownfield-specific tasks.
- Task sequencing and phasing needs.
- Assignments of task responsibilities.
- Potential funding sources and their requirements, such as who would request and manage the funds.

The order of specific elements of redevelopment and cleanup plans can be very important. An implementation strategy can show how different steps will fit together and support one another, ensuring that work proceeds as efficiently as possible.

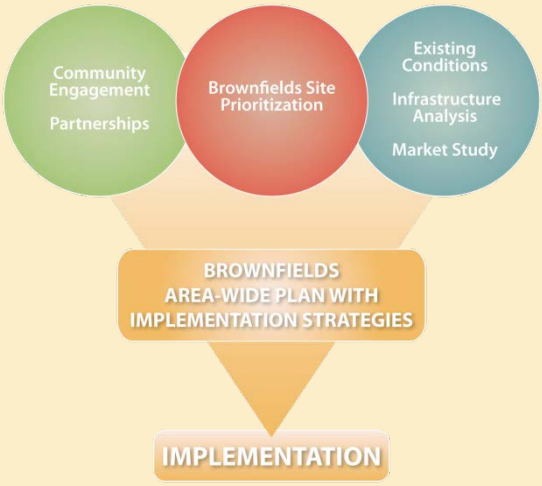
Key Resource

- Implementation Strategy for the city of Rome, New York (2010)

Benefits

- An implementation strategy is an important communications tool, showing investors and the public that the community is committed to investing in the neighborhood.
- By providing a roadmap for everyone involved in implementation, the strategy shows different participants how their efforts fit into the overall process.
- Laying out site-specific needs for multiple sites can highlight larger issues that might deserve special attention, such as environmental approvals or opportunities to coordinate infrastructure.

Impacts of Area-Wide Planning



Area-wide planning increases the impact of redevelopment efforts by integrating brownfield cleanup needs, community priorities, and information about the neighborhood to create a roadmap to the community's vision.

Source: Brownfields Area-Wide Planning Program (EPA, 2012)

5 Adopt Development Policies

This step in the redevelopment process puts in place policies and processes to ensure the intended plan is implemented with each site redevelopment. Similar to many tribes, Zuni Pueblo does not have a general land use plan, zoning code, or building permit process. All land is considered tribal land, owned by the tribe and held in trust by BIA. The Zuni Pueblo uses land assignments to grant individual families surface rights (for housing, farming, or economic development) while the tribe retains land ownership. Adopting standard policies can facilitate future economic and community development and shape the character of the Pueblo according to the community's wishes.

Why Include This Step?

Redevelopment is a multi-year process that requires many different people and groups to market, invest in, and build the plans completed early in the process. Laws and transparent processes are essential strategies to guide all of these people and groups while providing the consistency and predictability that developers and investors seek.

As a result of building partnerships early in the process, a strong organization of residents who remain active over time can help guide development and implementation of policies and laws and provide feedback on issues not addressed by policies.

Many tribes choose to adopt plans, zoning codes, and associated oversight structures in order to deal with strong demand for development. The need for development policies may be less obvious in communities with slower growth or with plenty of available land. However, even small, slowly growing places can save money, potentially increase the value of their land base, and increase their appeal to investors by preparing a land use plan and codes that establish development priorities, prioritize the use of existing infrastructure, introduce green building standards, and promote a variety of housing and transportation choices that meet residents' needs.

What Strategies Are Included in This Step?

Tribal governments have tremendous freedom to determine how to govern land use and development. Despite constraints associated with the federal government's role as trustee of tribal lands, tribes can choose whether to adopt comprehensive plans, functional plans (e.g., for housing or transportation), zoning codes, environmental permits, nuisance ordinances, or standard lease language.

The following strategies can help ensure the community vision and plan becomes implemented over time:

- Zoning Pilot
- Lease Language
- Green-Tape Program
- District Environmental Assessment
- Commercial Code

Key Point: Laws and policies provide consistent, transparent guidance for the variety of partners—tribal members, tribal and federal governments, or outside investors—who will implement redevelopment plans over time.

Development Policies: Zoning Pilot

Community Need

Zuni Pueblo has virtually no formal land use controls of its own, leaving the conditions for new development to be negotiated through the lease process. This site-by-site approach leads to process delays, inconsistencies from one site to the next, uncertainty about the area's future, and even a potential liability exposure for the tribe.

Description

The purpose of zoning is to codify a land use plan and associated requirements. Zoning codes define different zones by stating the permitted uses and structures allowed in each. Zoning codes can direct more dense development to places where it is more appropriate, such as a community gateway or business district. They can also protect natural areas and rangeland.

Land use codes can also guide the type of development that occurs within an area. For instance, a Main Street zone could support pueblo-style building design and setbacks or encourage consistent infrastructure improvements such as signage and pedestrian friendly walkways.

While implementing a zoning code for all of Zuni Pueblo would be a big job, the tribe could test new zoning in just one redevelopment area. The tribe has clear authority to adopt and enforce zoning for its lands; however, before proceeding, the tribe might want to consult an expert in tribal law to ensure the pilot code complies with all applicable laws and treaties.

Key Resource

Tribal Legal Code Project: Tribal Zoning Codes (Tribal Law and Policy Institute, undated)

Benefits

A zoning pilot would allow land assignees and businesses to become familiar with the real impacts and benefits of zoning, while the Pueblo of Zuni Tribal Council and local agency staff learn what works best for the Zuni Pueblo.

Zoning can:

- Increase certainty for investors, partnering agencies, and the community by codifying a community-based land use code.
- Prioritize and leverage infrastructure and other investments.
- Help realize community economic goals while protecting natural and culturally important features and areas.

Case Example: Muckleshoot Zoning Code

The Muckleshoot tribal economy and identity rely on natural resources, such as farms, forests, and fisheries. As growth pressures increase on the reservation, which is south of Seattle, Washington, the tribe has adopted a zoning code to protect its heritage without prohibiting growth. As stated in its zoning code, "the Muckleshoot Indian Tribe recognizes the need to ensure the orderly growth of its Reservation and the development of the Reservation to meet the needs of its people."

The code defines four zones and establishes a special use permit process to allow exceptions in each zone. The code identifies the Tribal Court as the ultimate reviewer of disputed decisions, and it reconfirms sovereign immunity.

Source: Muckleshoot Zoning Ordinance (section 7.01.010a, 1981)

Development Policies: Lease Language

Community Need

In the absence of zoning or any environmental, building, and business operations codes, Zuni lease agreements between a land owner and tenant currently serve as the primary legal vehicle to influence land use, equitable development, or operational requirements to prevent future environmental contamination.

Description

The historical purpose of the lease agreement within tribal government has been to provide a mechanism for BIA approval of land use activity to preserve the value of lands held in trust consistent with the Code of Federal Regulations, Title 25. However, the pueblo could modify standard lease agreements to enhance environmental protection and promote equitable redevelopment that benefits tribal members. Lease requirements could include:

- Provisions for handling stormwater, hazardous waste, and solid waste.
- Environmental review to identify and plan for potential adverse impacts.
- Notification of pueblo inspection and enforcement procedures.
- Specific numeric tribal hiring and job-training goals for both construction and operations.
- Living wage requirements.
- Standard lease rates or fees to support local tribal governmental programs.
- Environmental liability and bonding protections for the tribe.

Key Resource

Sample requirement language can be found in codes published by the Tribal Legal Codes project: www.tribal-institute.org.

Benefits

Benefits of enhancing environmental and labor protections through a standard lease agreement include:

- More living wage jobs on the pueblo.
- Less environmental contamination risk.
- More consistent income to cover tribal government program costs.
- More predictability for developers.

Lease or Permit

While lease modifications offer a short-term solution to improving environmental protection and local hiring practices, a more sustainable solution would involve adopting codes implemented through a permit system. In the long-term, a code provides several advantages over a lease agreement including:

1) Consistent application and enforcement of land use requirements.
2) Separating the political body from the administrative body in environmental enforcement.
3) Eliminating the need for BIA review and approval of lease provisions.

The Rosebud Sioux Tribe adopted "*Title 19: Environmental Protection*" in its Law and Order Code, which regulates environmental protection through permits rather than leases. The code states that, "uncontrolled use of the Reservation environment has a demonstrably serious impact that imperils the economic security, health, welfare and general well-being of the Tribe, its members and all residents of the Reservation." The code outlines administrative authority, procedures, and specific requirements for clean water, solid waste and wellhead protection.

Source: Law and Order Code (section 19-1-103, Rosebud Sioux Tribe, 1991)

Development Policies: Green-Tape Program

Community Need

The development approval process on tribal land can be complex and can involve numerous partners, including the developer, land assignment holder, the Tribal Council, and the Bureau of Indian Affairs. Streamlining this process for projects that align with priorities expressed in a district land use plan or other guiding document could help attract the types of development the tribe wants.

Description

Whereas a redevelopment-ready program focuses on cleanup and infrastructure, a "green-tape" program streamlines permitting and other approval processes in targeted areas where a municipality wants to encourage smart growth or other types of development. Even in rural areas, this concept can ensure that targeted development proposals are effectively shepherded through to successful completion.

To qualify, development projects might be required to comply with certain community land use plans not otherwise encoded in zoning. Developers interested in using the green-tape program can meet with planners for a pre-design consultation to ensure they can meet program requirements.

Projects that qualify for the green-tape program are typically assigned to a permit caseworker who coordinates with a cross-departmental team to move the project rapidly through the permitting process. In some cases, the pueblo might guarantee faster approval time for development projects.

Key Resource

Smart Growth Illustrated: Green Tape Program, Silver Spring, Maryland (EPA, 2012)

Benefits

- Green-tape programs can be specific to a geographic area where development is encouraged or to a type of desired development.
- Implementing a green-tape program demonstrates commitment to encouraging development within the green-tape zone.
- A green-tape program offers partnership opportunities with other agencies that can help streamline the permitting process.

Case Example: Montgomery County

Once thriving downtown Silver Spring, Maryland, declined in the 1970s. By the mid-1990s, investors were struggling to find funding for downtown development projects.

To encourage revitalization, Montgomery County piloted the Silver Spring Green Tape program. The program provided pre-design consultation for developers and streamlined the permitting process once a project entered the program. The program was designed to give investors confidence in downtown Silver Spring's revitalization potential and to move development projects efficiently through the permitting process.

The market responded by proposing over 750,000 square feet of retail and entertainment space, 500,000 square feet of office space, and over 4,000 residences for construction.

Sources: Green Tape Program (Montgomery County Government, 2012); Smart Growth Illustrated: Green Tape Program (EPA, 2012)

Development Policies: District Environmental Assessment

Community Need

Currently, each change in land use or business operator in the Zuni Pueblo requires a lease approval from the Bureau of Indian Affairs, whose federal action requires an Environmental Assessment (EA) to study the change's potential environmental impacts. The EA is an extra step on tribal land that potential small-scale business owners and developers do not face on non-tribal land. This extra step might lead some developers to more readily invest outside Zuni Pueblo.

Description

If a district land use plan has been developed for a district or specific area of the community, one option may be to conduct an EA of the plan and associated land uses proposed for multiple district sites. The assessment could be tailored to consider the natural, social, and economic impacts of importance to the tribe.

Once a district EA is approved, land use proposals that are consistent with the adopted land use plan may proceed without needing to conduct an individual EA. Legal counsel and coordination with the appropriate federal agencies would be needed to determine the future land use activities and federal actions that would be covered by a District EA.

Key Resources

Sample Environmental Assessment and environmental review forms:

- Environmental Assessment Form (Saint Regis Mohawk Tribe, Environment Division, 2007)
- Environmental Review Checklist (Saint Regis Mohawk Tribe, Environment Division, undated)

Benefits

A district EA for an adopted land use plan would:

- Allow the tribe to evaluate the cumulative impacts of multiple developments in a neighborhood or district.
- Apply a set of consistent and locally relevant criteria to the selection of new projects.
- Provide a more business-friendly environment for both tribal-owned and external businesses.
- Reduce the time needed to review and approve lease modifications.

Natural landscape in the Zuni Pueblo
Photo credit: John Foster

Case Example: Saint Regis Mohawk Tribe

The Environment Division of the Saint Regis Mohawk Tribe adopted an Environmental Assessment process similar to what the National Environmental Protection Act requires, which is an EA for federal and private actions with potentially significant environment impacts. The division tailored the process to be culturally relevant for the tribe.

To assist developers considering a project on tribal lands, the division developed a short "Environmental Review Checklist" that covers the major categories found in the EA.

Source: Saint Regis Mohawk Tribe Environment Division webpage (Saint Regis Mohawk Tribe)

Development Policies: Commercial Code

Community Need

Any requirements that Zuni Pueblo places on new and existing businesses are primarily implemented through its lease and permit system on a case-by-case basis, often with inconsistent requirements. These inconsistencies create uncertainty that can discourage businesses and redevelopment on pueblo land. Also, depending on the language used, current leases potentially leave the tribe responsible for cleanup of contaminated sites instead of the polluter.

Description

A commercial code is an important tool that can reduce transaction risks and increase business confidence that is vital to sustainable economic growth. One starting place for developing a commercial code is the Uniform Commercial Code (UCC), which codifies standards for commercial activity within the United States. The Model Tribal Code, developed by the University of Montana, offers an alternative template for tribes.

A standard commercial code, modified as needed, provides business owners with consistent expectations about how to conduct business within a community, including provisions for the sale of goods, secure transactions, set rates and fees, and lease requirements. The predictability of the code is important to businesses and gives investors more confidence to invest in new businesses on Zuni Pueblo land.

Key Resource

Tribal Legal Code Project: Commercial Codes
(Tribal Law and Policy Institute, 1999)

Benefits

A commercial code can:

- Protect the tribal interests from business transactions and lease agreements.
- Create a business-friendly environment by increasing certainty and defining community expectations for corporate responsibility.
- Increase consistency in how fees, liability, and other business requirements are applied.
- Reduce administrative review time in approval processes.

Case Example: Hoopa Valley Tribe, Hoopa, California

The Hoopa Valley Indian Reservation includes 1,700 enrolled tribal members and occupies about 12 square miles. The Hoopa Valley Tribe made history as one of the first tribes to become a sovereign nation. The tribe focuses on self-sufficiency and maintaining traditions and the Hoopa language, which at one time almost disappeared. Local enterprises include a gas station, a hotel, a newspaper, a casino, and concrete and forest products businesses.

The Hoopa Valley Tribe adopted an extensive business code that includes provisions for general business policy as well as sections related to corporations, non-profits, partnerships, small-business enterprises, and business licenses.

A copy of the Hoopa Valley Tribe code can be found in the Hoopa Valley website, also in the National Indian Law Library.

Case Study: Gila River Land Use Code

The Gila River Indian Community is a small rural area along the Gila River near the southern boundary of Phoenix, Arizona. It is made up of two distinct peoples: the Akimel O'otham and the Pee Posh.

An important issue that the Gila River community wished to reconcile was how to create a plan that would combine the community's overall goal of encouraging organized subdivisions and housing communities with many residents' desire to build on scattered rural sites.

Since the Gila River Community has limited available land, it decided to implement a land use code that was specific to homesites. The extensive code covers the assignment of individual lots within subdivisions, homesite leases outside subdivisions, allowable uses of homesites, revocation or transfer of assignments, and penalties for violations of the land use code.

The code lays out detailed land use provisions and clearly outlines administration and enforcement mechanisms. It offers an overview of the government entities needed to carry out the code properly and describes administration and enforcement policies. The code also allows companion guidance to explain the requirements as they apply to residents and business owners.

Understanding the type of growth the community wants is essential to producing a code that fulfills it. A homesite-specific land use code can work well if the community is looking for well planned subdivisions that are created using standard subdivision requirements.

Although the Gila River code provides one example for consideration, the regulatory approach would need to be tailored to fit the specific context and goals of another tribal community. To ensure that the code is implemented and enforced, the Tribal Council would need to build strong working relationships with staff tasked with administering and making decisions based on the code. Through their feedback, community members can also play a part in developing land use policies, leading to greater support for implementation and enforcement.

Source: Tribal Legal Code Project, Part Four (Tribal Law and Policy Institute, undated)
Image Source: Tribal Seal (Gila River Indian Community, undated)

6 Remediate Contaminated Sites

This step in the redevelopment process ensures that the cleanup approach selected will support the community's redevelopment plan. Land revitalization is a process of assessing a property for contamination, remediating (cleaning up) contamination, and returning the property to productive use.[4] Tribal communities can draw on regional, state, and federal partnerships for funding and technical expertise to help achieve cleanup goals.

Why Include This Step?

This guide lays out an approach to petroleum brownfield cleanup and reuse that can help a community make better investments in site assessment and remediation, ensuring that the community has a marketable asset as an end product rather than an unusable vacant site.

Tribes and small communities can easily access many EPA and other information sources to help them navigate state and federal brownfield remediation programs. This guide focuses instead on how a community's strategies for implementing the remediation process use available information, partnerships, and resources developed in earlier steps. For instance, how does information from a market study and community visioning process shape the reuse plan? How do partners work together to meet state and federal regulatory requirements?

Two of the three Zuni Pueblo sites under consideration are already in some stage of the remediation process. The following strategies borrow from the Zuni experience and explain how the different elements of a petroleum brownfield cleanup process relate to the larger redevelopment process.

What Strategies Are Included in This Step?

The strategies outlined here are some of the key elements in the legally-mandated brownfield remediation process. In addition to implementing the following plans and partnerships, tribal communities can continue to coordinate with state and federal agencies to ensure they have access to the latest requirements, funding sources, and technical assistance:

- Identify Appropriate Process and Partners
- Assessment of Contamination
- Site Reuse Plan
- Cleanup Work Plan

Key Point: A community vision and economic development goals will help those involved in planning and managing site clean-up select the most cost-effective techniques that can support desired future uses

[4] Building Vibrant Communities: Community Benefits of Land Revitalization (EPA, 2009)

Remediate Sites: Identify Appropriate Process and Partners

Community Need

Zuni Tribal leaders have identified remediation of petroleum brownfields as a priority that is consistent with their strong environmental values and collaborative approach for developing a community revitalization vision.

Description

Ideally leaders have already begun this step while building partnerships to engage the community in developing an area-wide revitalization vision. Having a concrete plan in place, strong community support, and allocated infrastructure investments increase funding potential and can streamline the cleanup process. In addition, the following considerations may be useful in choosing the appropriate process and partners to conduct a petroleum brownfields cleanup:

- Who will lead the remediation process? Is there an active site owner? Will the tribal government need to take the lead?
- Is the site eligible to enroll in a state voluntary remediation program such as New Mexico's Voluntary Remediation Program?
- Are there state or federal funding sources that could help fund assessment or cleanup?
- What implications does the desired future site use have for the remediation process? Some uses might require stricter cleanup standards or other requirements affecting the remediation design.

Key Resource

The Sustainable Native Communities Collaborative provides assistance to several native communities, focusing on sustainable development that preserves core values specific to each place.

Benefits

- Defining roles and creating clear channels of communication can help project partners collaborate more effectively to identify a process for achieving site cleanup and reuse goals.
- Mapping out the anticipated remediation process at the start of the project can help identify and remove barriers to cleanup and redevelopment.

Case Example: Three Nations Plaza Brownfields Redevelopment

The Reno-Sparks Indian Community strategically sought partners who could support their redevelopment goals by providing cleanup funding for a 22-acre brownfield site in Reno, Nevada. The site is composed of several adjoining, formerly industrial properties that the tribe bought using tribal revenues and a tribal municipal bond issue. Petroleum and lead contamination at the site were remediated using a loan from Nevada Department of Environmental Protection and a $950,000 loan from EPA's revolving loan fund.[5]

The tribe is in redeveloping the site into the Three Nations Plaza. Economic development at the site is expected to generate jobs and up to $6 million in annual tax revenues. The tribe will use the revenue to fund multiple investments, including repaying bonds issued for construction of a tribal health center, relocating the Northern Nevada Restitution Center, developing additional commercial facilities, enhancing police services, funding education, and fostering additional economic development.[6]

[5]EPA. Nevada Tribal Community Transforms Contaminated Property. http://www.epa.gov/region9/waste/features/RenoSparks. Accessed May 2, 2012.
[6]EPA. Nevada Tribal Community Transforms Contaminated Property. http://www.epa.gov/region9/waste/features/RenoSparks. Accessed May 2, 2012

Remediate Sites: Assessment of Contamination

Community Need

The Zuni Pueblo contains three petroleum brownfield sites in various stages of assessment and cleanup. An assessment determines the nature and extent of contamination if present, and identifies suitable cleanup options.

Description

An Environmental Site Assessment (ESA)--sometimes called a site characterization--helps clarify a site's history and the extent of contamination at a brownfield site.

Several types of ESAs exist:

- **Phase I ESA.** Often conducted before a property transfer, this process assesses site history and helps determine whether a site has potential for contamination.
- **Phase II ESA.** A Phase II ESA involves on-site sampling and helps to determine the extent, types, and probable sources of contamination; risks to human health and the environment; and the need for cleanup.
- **Expedited Site Assessment.** This process is used to more rapidly characterize underground storage tank sites by analyzing and interpreting data on the site as it is collected.

Key Resources

Assessments must conform with EPA and state regulations. For further information, check with the EPA Office of Underground Storage Tanks and the New Mexico Environment Department Petroleum Storage Tank Bureau. Resources specific to tribal lands can be found on EPA's Underground Storage Tanks Program In Indian Country web page.

Benefits

- ESAs provide clarity regarding the potential for or existence of contamination at a site.
- ESAs also characterize potential risk pathways that could lead to threats to human health and the environment.
- Conducting a Phase I ESA can help a prospective purchaser decide whether to purchase a site.
- Conducting a Phase II ESA supports the development of a cleanup work plan that is protective of human health and the environment.

Abandoned container in the Zuni Pueblo
Photo credit: John Foster

New Mexico Targeted Brownfields Assessment Program

The New Mexico Environment Department's Brownfields Program has funding available to provide tribes and municipalities with targeted brownfield assessment services, including:

- Site screenings.
- Phase I Environmental Site Assessments.
- Phase II Environmental Site Assessments.
- Phase III remediation planning costs.
- Remediation.

Sites in New Mexico must be owned by a tribe or municipality to qualify for services. Additional information is available at the New Mexico Environment Department Targeted Brownfields Assessment Program website.

Remediate Sites: Site Reuse Plan

Community Need

To ensure cleanup supports the intended future use, Zuni Pueblo can rely on a clear reuse plan for each site that guides site remediation and redevelopment funding.

Description

While the community may have already conducted scenario planning, developed a high-level concept plan, and adopted a more detailed district land use plan for the larger neighborhood, a site reuse plan outlines specific locations for future use directly on the petroleum brownfield site. Previous planning at the neighborhood scale can ensure that necessary infrastructure is in place and that the future uses of the petroleum brownfield site and surrounding properties can work together to achieve the community vision.

A site reuse plan can include future use goals, reuse and remediation considerations, implementation phasing, and stewardship options. The plan's elements can be outlined in detail for a single reuse scenario or may relate to several scenarios showing a range of site reuse options. Maps can effectively illustrate site options. The reuse planning process can include interviews to get stakeholder input on reuse goals, site-use analysis, stakeholder workshops on reuse scenarios, and development of a final reuse plan. Brownfield assessment funding may allow a portion of the funding to support community engagement and future use planning to inform cleanup efforts.

Key Resource

- The Quincy Smelter Plan offers an example of a site reuse plan that highlights local cultural and natural heritage with benefits for both community members and visitors.

Benefits

- Improve stakeholder relationships by developing a shared understanding of site reuse goals and objectives.
- Align reuse and remediation objectives.
- Reduce site stigma by identifying a range of reuse options favorable to the community and options for removing barriers to reuse.
- Identify long-term stewardship goals for a site and tailor remediation design and maintenance accordingly.

Case Example: Reuse Plan

The LaCasa Mill Street property is a 10-acre brownfield site next to a stream and a neighborhood. The city of Goshen, Indiana, and neighborhood representatives worked with EPA to identify future uses for the site based on the cost of remediation options, the community's desire for a safer and more connected neighborhood, and ecological conditions. Community members developed guiding principles and created and mapped a reuse plan for a multi-use park and habitat preserve that makes the community safer, more connected, and more environmentally sustainable.

Source: LaCasa Mill Street Reuse Concept Plan (Skeo Solutions, 2012)

Remediate Sites: Cleanup Work Plan

Community Need

After an Environmental Site Assessment determines a need for cleanup of a petroleum brownfields site, the Zuni Pueblo can benefit from having a detailed cleanup plan to meet community expectations for a well managed cleanup.

Description

A cleanup--or remediation action--work plan outlines proposed cleanup activities for all of a site's contaminants including those in the soil, sediment, groundwater, and indoor air. The work plan includes time and cost estimates for each activity. The work plan should incorporate recommendations of a Phase II Environmental Site Assessment.

Where redevelopment of the property is imminent, the work plan might be able to incorporate cleanup activities into the construction process, which might reduce cleanup costs in some instances. When cleanup does not remove all of a site's contaminants, the work plan might also include implementation of administrative or legal controls to limit or prevent the use of a site's contaminated areas.

If a site is enrolled in a program such as the New Mexico Environment Department Voluntary Remediation Program, the work plan might be subject to public comment and state approval.

Key Resource

The Toolbox for the Cleanup and Redevelopment of Contaminated Sites in Small Cities and Rural Communities provides additional detail and resources.

Benefits

- A cleanup work plan provides a detailed roadmap for cleaning up a petroleum brownfield site.
- Work plans that are subject to public review inform the community about potential site cleanup actions and can address community concerns before remediation begins.
- The cost estimates included in a site cleanup work plan can help prospective developers determine their return on investment.

Designing a Cleanup Work Plan

Factors that can be considered during the creation of a cleanup work plan include:

- Design, installation, and monitoring requirements for cleanup activities.
- Monitoring activities to measure when work has achieved desired cleanup targets.
- Community participation in work plan design and implementation.
- Protections for the community and adjacent properties during remediation.
- Cost constraints and cost saving opportunities for alignment with redevelopment activities.
- Liability considerations.
- Stewardship of remediation components.
- Implications of institutional controls for future use on the site.

Source: Road Map to Understanding Innovative Technology Options for Brownfields Investigation and Cleanup, Third Edition (EPA, 2001)

7 Secure Redevelopment Funding

This step in the process identifies funding for implementation. Lack of funding can limit the ability of the Zuni Pueblo or any other tribal community to achieve many development goals. Community revitalization is much more likely to succeed when supported by a variety of funding sources, including bankers, developers, builders, foundations, and others. Tribal communities can also incorporate funds from federal and state programs that support business and economic development.

Why Include This Step?

A benefit of combining petroleum brownfield cleanup with other neighborhood revitalization and economic development activities is the ability to integrate funding from different programs and sources to achieve a larger vision. Removing dangerous pollution from a site is an important activity on its own, but linking it to other community investments and activities can increase the chances that the cleaned up site will be redeveloped in a way that directly benefits residents, businesses, and tribal land assignees in the surrounding neighborhood.

Combining activities can improve access to funding because:

- State and federal agencies are increasingly interested in supporting community work via interagency partnerships that can help achieve multiple benefits for a single project and utilize resources more efficiently.
- Partner and community members can help identify common interests that can point to additional resources.
- Developers and investors may be more interested when a community demonstrates its intention to move beyond site cleanup and make and encourage additional investments in the same area.

The initial step of building partnerships early in the process is critical to the later step of finding and securing diverse funding. It can take significant effort to secure and coordinate different sources of funding. Programs supporting petroleum brownfields cleanup and redevelopment are complex, and it may help to combine one or more brownfields grants with other federal, state, and private sources that have their own application processes, deadlines, and requirements.

Key Point: Once community goals are defined, identify funding to achieve those goals. Partnerships established early on can help identify new resources and funding sources.

What Strategies Are Included in This Step?

The list of resources in this section demonstrates the range of funding sources that Zuni Pueblo might consider for petroleum brownfield redevelopment. The resources categories include:

- Petroleum Brownfields Cleanup and Redevelopment
- Community Revitalization
- Planning and Infrastructure

Secure Funding: Petroleum Brownfields Cleanup and Redevelopment

New Mexico Targeted Brownfields Assessment Program

This state program provides funding for specified activities related to brownfields assessment and cleanup, including petroleum brownfields. Criteria for these awards include:

- Redevelopment or reuse potential.
- Economic benefit to the surrounding community.
- Benefits to the environment.
- Public interest.
- Availability of funding.

For more information, contact the Voluntary Remediation Program Manager at (505) 827-2754 or visit the State of New Mexico Ground Water Quality Bureau website.

EPA Region 6 Targeted Brownfields Assessment Grants

Tribes are eligible to request free assistance for sites that are not covered by community brownfields assessment grants or the state Targeted Brownfields Assessment programs. This program can provide brownfield inventories, area-wide planning, site environmental assessments and investigations, and site cleanup planning. For more information, visit the Region 6 website.

Federal Brownfields Assessment, Revolving Loan Fund and Clean-Up (ARC) Grants

The federal government awards competitive grants of up to $200,000 per site for four different activities:

- Assessment to inventory, characterize, assess, and conduct planning and community involvement related to brownfields sites.
- Cleanup to carry out cleanup activities at brownfields sites.
- Revolving loan fund to capitalize a loan fund that makes loans and sub-grants.
- Job training to provide environmental training for residents.

Federal Area-Wide Planning Pilot Grants

The pilot program awards grants of up to $175,000 to facilitate community involvement in developing an area-wide plan for brownfields assessment, cleanup, and subsequent reuse. An important goal of the program is to fund community-based partnership efforts that create a planning framework to advance economic development and job creation. For more information, visit the US EPA's Brownfields Area-Wide Planning Program webpage.

Federal Section 128(a) Grants

These grants are awarded to states and tribes to support ongoing brownfields response programs that include timely survey and inventory of brownfields sites, oversight, and other mechanisms to ensure that a response action will protect human health and the environment, meaningful opportunities for public participation, mechanisms for approval of a cleanup plan, and verification and certification that cleanup is complete. For additional information on applying for these grants, visit the US EPA's State & Tribal response program's website.

Secure Funding: Community Revitalization

Indian Housing Block Grant

The U.S. Department of Housing and Urban Development (HUD) administers the single largest source of funds for housing construction and rehabilitation on tribal lands. The newly-independent Zuni Housing Authority would be responsible for spending this block grant and should be an important partner in cleanup and redevelopment planning. For more information on eligible projects and applicants, visit the HUD Indian Housing Block Grant program webpage.

Indian Community Development Block Grant

The Zuni have been very successful in applying for federal funds through Indian Community Development Block Grants (CDBG). These grants can be used for housing, community development, and economic development activities. While tribes and tribal organizations must apply for the funds, some of them may be used to support third-party activities and projects. For more information on eligible projects and applicants, visit the CDBG program webpage.

HUD Section 108 Loan Guarantees

The loan guarantee program allows CDBG recipients to convert some of their grant funding into larger loans, giving them access to enough capital to complete larger projects. For more information, contact HUD's Field Office in Albuquerque at (505) 346-7361 or visit HUD's section 108 webpage.

New Markets Tax Credits

The New Mexico Finance Authority administers the state's New Markets Tax Credits, which were established to provide greater access to financing for new, expanding, or relocating businesses in underserved areas across the state. Eligible activities include:

- Loans or investments located in low-income census tracts.
- Development of commercial, industrial, and retail real estate projects (including community facilities) in low-income census tracts.
- Development of for-sale housing in low-income census tracts.

More information is available at the New Mexico Finance Authority's website.

U.S. Department of Agriculture (USDA) Rural Business Enterprise Grants (RBEG Program)

These grants support projects that finance and facilitate development of small and emerging rural businesses. Grants can be used for a broad range of projects, including acquisition or development of land, construction or renovation of buildings, capitalization of revolving loan funds, training and technical assistance, and rural transportation improvements. Rural public entities, tribes, and rural private non-profit corporations are eligible to apply for funding. For more information, contact the Business Programs office of USDA's New Mexico office at (505)761-4953, or visit the USDA's RBEG webpage.

USDA Rural Economic Development Loan and Grant (REDLG)

These grants and loans can be used for economic development activities and projects that create and retain employment in rural areas. Under the program, local utility organizations apply for grants and loans and then pass funds through to local businesses for eligible projects. For more information, contact the Business Programs division of USDA's New Mexico office at (505)761-4953, or visit the USDA's REDLG webpage.

USDA Rural Business Opportunity Grants (RBOG)

This competitive grant program provides up to $50,000 for projects that support sustainable economic development in rural areas, such as community economic development projects, technology-based economic development, feasibility studies and business plans, leadership and entrepreneur trainings, rural business incubators, and long-term business strategic planning. Tribes are eligible to apply for grants, as are public bodies, non-profits, institutions of higher education, and rural cooperatives. For more information, visit the USDA's RBOG webpage.

USDA Community Facilities Grants

Grant funds can be used to construct, enlarge or improve community facilities for health care, public safety, and community and public services. This can include the purchase of equipment required for a facility's operation. Grants are available to public entities, such as tribal governments that have the legal authority necessary for the construction, operation, and maintenance of the proposed facility and are unable to obtain needed funds from commercial sources at reasonable rates and terms. For more information, contact the Rural Development division in USDA's New Mexico office or visit the USDA Community Facilities Grants webpage.

Secure Funding: Planning and Infrastructure

USDA Water and Waste Disposal Direct Loans and Grants

This funding is available to build water and waste disposal systems in rural areas with a population not in excess of 10,000. Funds can be used for construction, land acquisition, legal fees, engineering fees, capitalized interest, equipment, initial operation and maintenance costs, and project contingencies. The funds are available to public bodies, non-profit corporations, and Indian tribes. To qualify, applicants must be unable to obtain the financing from other sources at rates and terms they can afford or from their own resources. For more information visit the USDA's webpage or contact the USDA's Rural Development State office at (505) 761-4955 or Area Office at (505) 334-3090, Extension 4.

USDA Rural Energy for America Program Grants

The Rural Energy for America Program provides grants to agricultural producers and rural small businesses to purchase, install, and construct renewable energy systems and make energy efficiency improvements to non-residential buildings and facilities. For more information visit the USDA's webpage.

Transportation Investment Generating Economic Recovery (TIGER) Grants

TIGER grants support innovative capital projects that have a significant impact on the national transportation system and economy. Selection criteria include the project's impact on improving the condition of existing transportation facilities and systems, contributing to the economic competitiveness of the United States over the medium to long term, the creation of livable communities through place-based policies and investments that increase transportation choices and access to transportation services, and the contribution to energy efficiency and air quality goals. For more information, review the US DOT TIGER webpage.

Appendix: Additional Resources

1. Build Partnerships

Community and Public Relations Plan

Community Engagement Models

- Sustainable Native Communities Collaborative: http://www.sustainablenativecommunities.org/fieldnews/
- EPA Community Engagement Initiative (EPA, 2012): http://www.epa.gov/oswer/engagementinitiative/index.htm
- The Model Plan for Public Participation (National Environmental Justice Advisory Council, 2000): http://www.epa.gov/compliance/ej/resources/publications/nejac/model-public-part-plan.pdf

How to Write a Community and Public Relations Plan

- Crafting an Effective Plan for Public Participation (Center for Land Use Education, 2004): http://www.uwsp.edu/cnr-ap/clue/Documents/publicProcesses/Crafting_Effective_Plan_for_Public_Participation.pdf

Sample Plans and Policies

- Public Participation for Park Planning (City of Raleigh, 2012): http://www.raleighnc.gov/arts/content/PRecDesignDevelop/Articles/ParkMasterPlanProcessReport.html
- Public Participation in Land Use Planning (Oregon City Planning Department, 2012): http://www.orcity.org/planning/public-participation-land-use-planning
- Public Participation Plan for a Long-Range Transportation Plan and Land Use Plan (Menominee Indian Tribe of Wisconsin, 2012): http://www.menominee-nsn.gov/mitw/pdf/CommDevCorner/Men_Tribe_pub_part_plan_Final.pdf
- California Native American Tribal Engagement in the California Water Plan Update 2013 (California Department of Water Resources): http://www.waterplan.water.ca.gov/tribal2/engagement/index.cfm
- North Carolina Brownfields Redevelopment Toolbox (North Carolina Department of Environment and Natural Resources, 2008): http://portal.ncdenr.org/c/document_library/get_file?uuid=63213977-9d57-437e-a4c1-3fbbb88b47e5&groupId=38361
- Seattle's Columbia City (Asset-Based Community Development Institute, 2009): http://www.abcdinstitute.org/stories/seattle/

Revitalization Team

- Unlocking Brownfields: Keys to Community Revitalization (National Association of Local Government Environmental Professionals, undated, p. 115) http://www.resourcesaver.com/file/toolmanager/CustomO93C337F65023.pdf

Intra- and Intergovernmental Working Groups

- Voices from Forgotten Cities: Innovative Revitalization Coalitions in America's Older Small Cities (Hoyt and Leroux, 2007): http://www.policylink.org/atf/cf/%7B97c6d565-bb43-406d-a6d5-eca3bbf35af0%7D/VOICES-FORGOTTENCITIES_FINAL.PDF

Public-Private Partnerships

Public Private Partnership Funding

- Southwest Native Green Fund
  http://www.confluencephilanthropy.org/?page=NMPRI

2. Engage the Community in Building a Vision

- The Community Visioning and Strategic Planning Handbook (National Civic League, 2000): http://www.cpn.org/tools/manuals/community/pdfs/vsphandbook.pdf

Community Needs Assessment

How to Conduct a Community Needs Assessment

- A Community Needs Assessment Guide: A Brief Guide on How to Conduct a Needs Assessment (Loyola University Center for Urban Research and Learning, Chicago, 2000): http://www.luc.edu/media/lucedu/curl/pdfs/A_Community_Needs_Assessment_Guide_.pdf

Sample Community Needs Assessments:

- 2005 Community Needs Assessment (United Way of Central New Mexico, 2005): http://www.uwcnm.org/about/our_research.html
- Central New Mexico Education Needs Assessment (University of New Mexico Bureau of Business and Economic Research): http://www.uwcnm.org/documents/educ_needs_assessment.pdf
- Freeport Brownfields Third Ward Survey - Health Monitoring Study (University of Illinois, 2011): http://rockford.medicine.uic.edu/UserFiles/Servers/Server_442934/File/HSR%20Project%20List,%202-12.pdf
- Understanding Our Community's Needs: 2010 Community Needs Assessment (United Way of Central New York, 2010): http://www.unitedway-cny.org/Community%20Needs%20Assessment%20SUMMARY%20report%20FNL.pdf

Community Wealth Assessment

Wealth Creation in Rural Communities Initiative

- Wealth Creation in Rural Communities website (supported by the Ford Foundation): http://www.creatingruralwealth.org/

Sample Wealth Measurement Tool

- Wealth Creation in Rural Communities: A New Approach (Yellow Wood Associates, undated): http://www.yellowwood.org/WCRC%20Short%20Description.pdf

Market Study of Assets and Needs

- Downtown and Business District Market Analysis: http://fyi.uwex.edu/downtown-market-analysis/analysis-of-opportunities-by-sector/retail-service-businesses/
- U.S. Small Business Administration: http://www.sba.gov/content/do-your-market-research

SWOT Analysis

How to Conduct a SWOT Analysis

- SWOT Analysis: Strengths, Weaknesses, Opportunities, and Threats (The Community Toolbox, 2012): http://ctb.ku.edu/en/tablecontents/sub_section_main_1049.aspx

Sample SWOT Analyses

- 2030 Comprehensive Plan, Appendix E: Community Input, SWOT Analysis (Dayton, MN, 2007): http://www.cityofdaytonmn.com/documents/Appendix%20E-Community%20Input.pdf
- Strategic Plan (North Country Regional Economic Development Council (NCREDC, undated): http://regionalcouncils.ny.gov/themes/nyopenrc/rc-files/northcountry/NCREDC_SMALL.pdf
- Strategic Plan (Mohawk Valley Regional Economic Development Council, 2011): http://regionalcouncils.ny.gov/themes/nyopenrc/rc-files/mohawkvalley/MVREDCStrategicPlanFinal11142011.pdf
- Draft SWOT Analysis (Mohawk Valley Regional Economic Development Council, 2011): http://regionalcouncils.ny.gov/themes/nyopenrc/rc-files/mohawkvalley/Mohawk_Valley_Draft_SWOT.pdf

Scenario Planning and Concept Plan

- Scenario Planning: A Tool for Conservation in an Uncertain World (lists steps for completing a successful scenario plan): http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCoQFjAA&url=http%3A%2F%2F26-118.bluehost.com%2Freferences%2Fdownload%2F95%2FPeterson-et-al-2003---Scenario-Planning.pdf&ei=LXpXUL2TPIrh0QGrwYGgAg&usg=AFQjCNHZv6xQ9cLOTM4876CQ_GcIFj3eVQ
- Niles Concept Plan (City of Freemont, 2001): http://www.nilesmerchants.com/images/Niles_Concept_Plan.pdf

Conflict Resolution Techniques

Finding Alternative Dispute Resolution Services

- EPA Conflict Prevention and Resolution Center (EPA, 2012): http://www.epa.gov/adr/index.html

- Alternative Dispute Resolution Committee (State Bar of New Mexico, 2012): http://www.nmbar.org/AboutSBNM/Committees/ADR/ADRcommittee.html

Understanding Alternative Dispute Resolution Techniques

- Alternative Dispute Resolution: A Resource Guide (U.S. Office of Personnel Management, 2012): http://www.opm.gov/er/adrguide/section1-a.asp
- Alternative Dispute Resolution (Vermont Natural Resources Council, 2012): http://vnrc.org/resources/community-planning-toolbox/tools/alternative-dispute-resolution/

3. Build Economic Capacity

Economic Capacity Building

- Growing Economies in Indian Country: A National Summit (Federal Reserve Board, May 2012): http://www.federalreserve.gov/newsevents/conferences/indian-country-publication.htm

Economic Gardening

Economic Gardening Descriptions

- Economic Gardening (City of Littleton, CO, 2012): http://www.littletongov.org/bia/economicgardening/
- Economic Gardening: Next Generation Applications for a Balanced Portfolio Approach to Economic Growth (Quello and Toft, 2006): http://archive.sba.gov/advo/research/sbe_06_ch06.pdf
- Rethinking Asset-Building in Indian Country (First Nations Development Institute, 2009): http://www.firstnations.org/KnowledgeCenter/NativeAmericanBusinessDevelopment/AssetBuilding/AssetWatch

Sample Economic Gardening Programs and Strategies

- Economic Gardening: Creating Jobs by Growing Rural Businesses, a Workable Economic Development Strategy for Rural Utah (Governor's Rural Partnership Board Economic Development Sub-Committee, 2010): http://www.energy.utah.gov/government/strategic_plan/docs/publiccomments/govruralpartnershipboard09102010.pdf
- GrowFL website (Florida Economic Gardening Institute at the University of Central Florida, 2012): http://www.growfl.com/
- Kansas Economic Gardening Network: http://networkkansas.com/about/network-kansas-programs/kansas-economic-gardening-network
- Wyoming Business Council website (Wyoming Business Council, 2012): http://www.wyomingbusiness.org/

Redevelopment-Ready Site Program

- (Re)Development Ready Guide (Urban Land Institute, 2012): http://minnesota.uli.org/wp-content/uploads/2012/06/ULI-MN-ReDevelopment-Ready-Guide-May-2012.pdf

Buy-Local Program

- Testimony before the Committee on Environment and Public Works: Oversight Hearing on the Brownfields Program – Cleaning Up and Rebuilding Communities (E. Evans Paull, Executive Director, National Brownfields Coalition, 2011): http://www.smartgrowthamerica.org/documents/senate_testimony_epaull.pdf
- The Economics of Buy Local Initiatives (Mississippi State University Extension Service, 2010): http://msucares.com/pubs/publications/p2581.pdf
- Twice is Nice Buy Local Program (Green Project Exchange, undated): http://www.greenprojectexchange.org/gpe/projects.html?action=detail&skuvar=34
- Community Development Technotes: Development Strategies for Remote or Declining Rural Communities (U.S. Department of Agriculture, Rural Development, Office of Community Development, 1999): http://www.rurdev.usda.gov/SupportDocuments/tn17_decling_population.pdf

Strong Sense of Place

- Envision Victor (City of Victor, ID, 2012): http://www.victorcityidaho.com/content/envision-victor
- Planning for a Sense of Place: A Comprehensive Plan for the City of Victor (City of Victor, ID, 2006): http://www.victorcityidaho.com/content/comp-plan
- Community Culture and the Environment: A Guide to Understanding a Sense of Place. (EPA's former Office of Policy and the Office of Water, 2002): http://www.epa.gov/care/library/community_culture.pdf
- Enhancing Downtown's Sense of Place (Kent Robertson, 1999): http://www.preservationnation.org/main-street/main-street-news/1999/09/enhancing-downtowns-sense-of-place.html

4. Develop an Area-Wide Redevelopment Plan

Site Inventory

Brownfields-Specific Inventories

- ATSDR Brownfield/Land Reuse Initiative (Agency for Toxic Substances and Disease Registry, 2010): http://www.atsdr.cdc.gov/sites/brownfields/site_inventory.html
- Petroleum Brownfields: Developing Inventories (EPA, 2009): http://www.epa.gov/oust/pubs/pbfdevelopinventories.pdf

Sample Site Inventories

- How to Purchase a Tax-Delinquent Brownfield in Milwaukee (Milwaukee, WI, 2012): http://city.milwaukee.gov/Information-on-how-to-purchase.htm
- Categories of Los Angeles Brownfield Sites (Los Angeles, CA, 2011): http://www.ci.la.ca.us/ead/brownfields/Site%20Information.htm

Infrastructure Capacity Assessment

- Brownfields Area-Wide Planning Program (EPA, 2012): http://www.epa.gov/brownfields/areawide_grants.htm

District Land Use Plan

- American Planning Association website (American Planning Association, 2012): http://www.planning.org/

Implementation Strategy

- Tribal Legal Code Project: Land Use and Planning (Tribal Law and Policy Institute, undated): http://www.tribal-institute.org/codes/part_four.htm

5. Adopt Development Policies

Zoning Pilot

Zoning

- Muckleshoot Zoning Ordinance (1981): http://www.nplnews.com/toolbox/tribal/24.html
- Colville Zoning Ordinance (Colville Business Council, 2007): http://www.colvilletribes.com/4_3_land_use_and_development.php

Overlay Zone Descriptions

- Tribal Legal Code Project: Tribal Zoning Codes (Tribal Law and Policy Institute, undated): http://www.tribal-institute.org/codes/part_five.htm
- Flexible Zoning Techniques: Overlay Zones (American Planning Association, 2012): http://www.planning.org/divisions/planningandlaw/propertytopics.htm#Overlay
- Innovative Zoning Techniques: Overlay Districts (Green Valley Institute): http://www.greenvalleyinstitute.org/brochures/fact_sheet_6_overlay_zones.pdf
- Overlay Zones (Thompkins County Planning): http://www.tompkins-co.org/planning/vct/tool/overlayzones.html

Sample Zoning Overlay Types

- General Management Plan, Section 3.6: Cultural Landscape Overlay Zone (Negwegon State Park, 2008): http://www.michigan.gov/documents/dnr/thompsons_harbor_sp_ph1_approved_337375_7.pdf?page=48
- Create a Comprehensive Vision and Policy Agenda for Regional Development (Miami Valley Regional Planning Commission, undated): http://docs.mvrpc.org/vacant/reinv_theme_7.pdf

Lease Language

- Helping Expedite and Advance Responsible Tribal Homeownership Act (HEARTH Act) is a federal law signed in 2012 allowing greater tribal control over specific types of leasing on tribal lands: http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=332122
- Sample requirement language can be found in codes published by the Tribal Legal Codes project: http://www.tribal-institute.org/lists/codes.htm

Green-Tape Program

- Department of Permitting Services: Green Tape Program (Montgomery County, MD, 2012): http://permittingservices.montgomerycountymd.gov/DPS/customerservice/GreenTape.aspx
- Smart Growth Illustrated: Green Tape Program, Silver Spring, Maryland (EPA, 2012): http://www.epa.gov/dced/case/greentap.htm

Commercial Code

- Tribal Legal Code Project: Commercial Codes (Tribal Law and Policy Project, undated): http://www.tribal-institute.org/codes/part_seven.htm
- Indian and Alaska Natives Support Plan to Increase Energy Production, Job Creation, on Tribal Lands (U.S. House of Representatives, Natural Resources Committee, 2012): http://naturalresources.house.gov/uploadedfiles/02.15.12-indiansleghearingrecap.pdf

District Environmental Assessment

Sample Environmental Assessment and Environmental Review Forms

- Environmental Assessment Form (Saint Regis Mohawk Tribe, Environmental Division): http://www.srmtenv.org/doc_files/env_asmts/EA_Form.pdf
- Environmental Assessment Form (Saint Regis Mohawk Tribe, Environment Division, 2007): http://www.srmtenv.org/doc_files/env_asmts/srmt_env_ea_clist03.pdf

6. Remediate Contaminated Sites

Identify Appropriate Process and Partners

- Underground Storage Tanks Program In Indian Country (EPA 2012): http://www.epa.gov/oust/tribes/index.htm

Assessment of Contamination

U.S. EPA

- Expedited Site Assessments (EPA, 2012): http://www.epa.gov/oust/cat/esa.htm
- EPA Region 6 Office Underground Storage Tanks (EPA, 2012): http://www.epa.gov/region6/ust/index.htm
- Underground Storage Tanks Site Characterization/Assessment (EPA, 2012): http://www.epa.gov/oust/cat/sitechar.htm

New Mexico Environment Department

- Petroleum Storage Tank Bureau (New Mexico Environment Department, 2012): http://www.nmenv.state.nm.us/ust/ustbtop.html
- Ground Water Quality Bureau, Remediation Oversight Section (New Mexico Environment Department, 2012): http://www.nmenv.state.nm.us/gwb/NMED-GWQB-RemediationOversight.htm
- Ground Water Quality Bureau, Voluntary Remediation Program (New Mexico Environment Department, 2012): http://www.nmenv.state.nm.us/gwb/NMED-GWQB-VoluntaryRemediationProgram.htm

Cleanup Work Plan

- Road Map to Understanding Innovative Technology Options for Brownfields Investigation and Cleanup, Third Edition (EPA, 2001): http://www.epa.gov/tio/download/misc/roadmap3edition.pdf
- Financing Underground Storage Tank Work: Federal and State Assistance Programs (EPA, 1999): http://www.epa.gov/swerust1/pubs/ustfinan.pdf
- Ground Water Quality Bureau: New Mexico Targeted Brownfields Assessment Program (New Mexico Environment Department, 2012): http://www.nmenv.state.nm.us/gwb/NMED-GWQB-Brownfields.htm
- Requirements for Reimbursement from the Corrective Action Fund, Effective June 15, 2009 (New Mexico Environment Department, 2009): http://www.nmenv.state.nm.us/ust/documents/CAFPamphlet-June102009.pdf
- Brownfields and Land Revitalization Grants and Funding (EPA, 2012): http://epa.gov/brownfields/grant_info/index.htm

Site Reuse Plan

Cleanup and Redevelopment Resources and Case Studies

- Brownfield Remediation and Reuse Resources (American Planning Association, 2012): http://www.planning.org/nationalcenters/health/brownfield.htm
- State and Tribal Response Program Highlights (EPA, 2011): http://www.epa.gov/brownfields/state_tribal/stssmarapr11.pdf
- Toolbox for the Cleanup and Redevelopment of Contaminated Sites in Small Cities and Rural Communities (Association of State and Territorial Solid Waste Management Officials, State Response and Brownfields Program Operations Task Force, 2007): http://www.astswmo.org/Files/Policies_and_Publications/CERCLA_and_Brownfields/Toolboxfinal.pdf

Reuse Planning

- Superfund Redevelopment Initiative (EPA, 2012): http://www.epa.gov/superfund/programs/recycle/
- Superfund Reuse: Planning for the Future (EPA, 2011): http://www.epa.gov/superfund/programs/recycle/pdf/reuseplanning.pdf

Sample reuse plans

- LaCasa Mill Street Reuse Concept Plan (Skeo Solutions, 2012): http://www.skeo.com/projects/lacasa_mill_street_reuse_concept_plan
- East Helena Community Planning Charrette (Skeo Solutions, 2012): http://www.skeo.com/projects/east_helena_community_planning_charrette

Region 6 Reuse Coordinator
- Casey Luckett-Snyder: luckett.casey@epa.gov | 214.665.7393

7. Secure Redevelopment Funding

Brownfields Cleanup and Redevelopment

Descriptions of Programs Created Using Section 128(a) Funding
- Tribal Brownfields and Response Programs (US EPA, 2011): http://www.epa.gov/brownfields/state_tribal/tribalreport11.pdf

General Resources
- Financing Strategies for Brownfield Cleanup and Redevelopment (Charlie Bartsch and Barbara Wells, Northeast Midwest Institute, 2003): http://www.nemw.org/images/stories/documents/BFfinancingredev.pdf
- Financing Brownfield Redevelopment in Small Towns and Rural Areas: Helpful Hints and Examples (Charlie Bartsch and Barbara Wells, Northeast Midwest Institute, 2006): http://www.nemw.org/images/stories/documents/brownfield%20rural%20financing.pdf
- State and Local Non-Cash Tools and Strategies to Enhance a Brownfield Project's Bottom Line (Charlie Bartsch and Barbara Wells, Northeast Midwest Institute, 2006): http://www.nemw.org/images/stories/documents/Brownfield%20non-cash%20tools.pdf

Brownfields Cleanup and Redevelopment Programs Websites and Brochures
- New Mexico Targeted Brownfield Assessment: http://www.nmenv.state.nm.us/gwb/NMED-GWQB-Brownfields.htm
- US EPA Region 6 Targeted Brownfield Assessment webpage: http://www.epa.gov/region6/6sf/bfpages/tba.htm
- EPA Brownfield Assessment Grant fact sheet: http://www.epa.gov/swerosps/bf/grant_info/assess/assessment_factsheet.pdf
- EPA Brownfield Cleanup Grant fact sheet: http://www.epa.gov/swerosps/bf/grant_info/cleanup/cleanup_factsheet.pdf
- EPA Brownfield Revolving Loan Fund fact sheet: http://www.epa.gov/swerosps/bf/grant_info/rlf/rlf_factsheet.pdf
- EPA Brownfield Job Training Grant information: http://www.epa.gov/swerosps/bf/grant_info/jt/jtgrant030411.pdf
- EPA Brownfields Area-Wide Planning Grant fact sheet: http://www.epa.gov/brownfields/grant_info/AWP-factsheet-July-2012.pdf

- EPA State and Tribal Programs webpage: http://www.epa.gov/brownfields/state_tribal/index.html

Community Revitalization

- HUD Indian Housing Block Grants webpage: http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/grants/ihbg
- HUD Indian Community Development Block Grants webpage: http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/grants/icdbg
- HUD Section 108 Loan Guarantee webpage: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs/108
- New Mexico Finance Authority's New Market Tax Credits program: http://nmfa.net/NMFAInternet/NMFA_Web.aspx?ContentID=146
- USDA Rural Business Enterprise Grants: http://www.rurdev.usda.gov/BCP_rbeg.html
- USDA Rural Economic Development Loans and Grants: http://www.rurdev.usda.gov/rbs/busp/redlg.htm
- USDA Rural Business Opportunity Grants: http://www.rurdev.usda.gov/bcp_rbog.html
- USDA Community Facilities Grants: http://www.rurdev.usda.gov/had-cf_grants.html

Planning and Infrastructure

- USDA Water and Waste Disposal Direct Loans and Grants: http://www.rurdev.usda.gov/UWP-dispdirectloansgrants.htm
- USDA Rural Energy for America program: http://www.rurdev.usda.gov/rbs/busp/9006grant.htm
- DOT TIGER grants webpage: http://www.dot.gov/tiger

End Notes

[1] U.S. Census Bureau State & County Quick Facts: (http:/quickfacts.census.gov/qfd/states/35/3586595.html)

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