



# U.S. EPA PACIFIC SOUTHWEST REGION

Arizona • California • Hawaii • Nevada Pacific Island Territories • 148 Tribal Nations

## BROWNFIELDS REDEVELOPMENT PROCESS



### **BROWNFIELDS REDEVELOPMENT**

#### **REIMAGINING AND REINVESTING IN EXISTING COMMUNITIES**

Redeveloping a brownfield property into a new use can be transformative not only for that single property but also for the broader community. Redeveloped properties give back to surrounding neighborhoods and encourage additional reinvestment. Redeveloped brownfields provide lasting economic, environmental and community benefits.



### **CLEANUP**

#### **PROPERTY CLEANUP • HIRING LOCAL WORKFORCE**

The extent of cleanup required at a brownfield depends on how the property will be reused. A state, tribal or local regulatory entity will oversee the cleanup process. Common cleanup approaches include excavating and disposing of soil at a landfill, placing a protective cap over contaminated soil, treating the soil in place and utilizing microorganisms or plants to break down contaminants. Cleanup is also an opportunity to employ residents who are certified to work on brownfield sites.



### **PLANNING**

#### **CLEANUP PLANNING • FINANCING • DESIGN • ENTITLEMENTS**

Permits, approvals, loans and grants are the details that move a brownfields redevelopment project from a vision to reality. This is also the stage where integrated sustainability features are most easily incorporated into a project. Various entities are involved in creating, reviewing and approving site-specific plans for redevelopment. They include environmental professionals, engineers, architects, city planners, environmental regulatory agencies, banks and investors.



### **PRE-DEVELOPMENT ANALYSES**

#### **MARKET FEASIBILITY • INFRASTRUCTURE • SITE REUSE**

Successful brownfield redevelopment depends on compatibility with surrounding land uses, market demand, infrastructure capacity and existing commercial enterprises. This information is used to identify a redevelopment project that is financially feasible for the private developer, public sector and/or nonprofit entities involved in the project.



### **ENVIRONMENTAL INFORMATION**

#### **HISTORIC PROPERTY USES • EXTENT OF ENVIRONMENTAL CONTAMINATION**

Having a solid understanding of the environmental condition of the property reduces project risk because it reduces uncertainty. The historic uses of the property provide clues to the likelihood, location and type of contamination that may be found. Testing the soil, air and groundwater provides more detailed information on the specific contaminants and the extent of contamination.



### **REDEVELOPMENT VISION**

#### **LOCAL GOVERNMENT • COMMUNITY MEMBERS • DEVELOPERS • NONPROFITS**

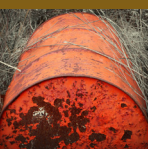
Brownfields redevelopment takes many forms, including open space, housing, retail, restaurants, grocery stores, warehouses and industrial and renewable energy facilities. Creating a redevelopment vision that is led by community stakeholders generally results in development that is enduring, equitable and serves as a catalyst for other transformative improvements in the neighborhood.



### **ABANDONED, BLIGHTED PROPERTY**

#### **SOCIAL AND ECONOMIC IMPACTS**

Abandoned, blighted and potentially contaminated properties negatively impact the communities around them. Decades of economic disinvestment in individual properties can result in marginalized neighborhoods with lower property values, higher crime rates and fewer employment and educational opportunities. This absence of public and private investment can contribute to persistent poverty.



### **CONTAMINATION**

#### **HEALTH AND ECOLOGICAL IMPACTS**

People who live, work or play on or near brownfields may not know they could be exposed to contaminants that remain from historic uses. These contaminants can also affect the health of the air, water, soil, plants and animals. Common contaminants on brownfields include lead, petroleum, asbestos, polycyclic aromatic hydrocarbons, heavy metals and volatile organic compounds. These substances are often used or produced through commercial and industrial activities.



### **HISTORIC USES**

#### **INDUSTRIAL AND COMMERCIAL FACILITIES**

Many commercial, industrial and even some residential properties may be contaminated due to the hazardous substances and petroleum products historically used on the property. These properties are called 'brownfields'. Sometimes contamination is extensive, requiring significant cleanup investment to allow for safe property reuse and redevelopment.