



Climate Smart Brownfields

Launching the Next Generation of Brownfield Revitalization

As the U.S. Environmental Protection Agency's (EPA) Brownfields Program reaches its 20th year in 2015, EPA will launch a handful of initiatives to spark the *Next Generation of Brownfields Revitalization*. Through these initiatives, EPA will help communities develop sustainable strategies to address climate change and become more climate resilient through brownfield revitalization. EPA's *Climate Smart Brownfields* initiative will foster stakeholder engagement and collaboration by: (1) developing innovative approaches and best practices for implementing climate adaptation and mitigation strategies at brownfield sites; (2) issuing a resource guide for climate smart brownfields with valuable information and resources for practitioners; and (3) offering technical assistance to brownfield grantees seeking to use climate smart brownfield approaches.

Climate-related impacts are occurring across the country and are expected to increase in the future. Many places already are experiencing extreme weather events, including more frequent and severe floods, droughts, coastal erosion, wildfires, and heat waves. Changes in rainfall patterns can have unexpected and sometimes disastrous impacts on infrastructure and buildings, including brownfields. Further, our planet's oceans and glaciers are experiencing major changes—oceans are warming and becoming more acidic, ice caps are melting, and sea levels are rising—putting brownfields located in coastal areas at greater risk for flooding. For example, a brownfield redeveloped in an area not prone to flooding today may be subject to frequent and severe flooding 20 years from now, putting people at risk. Cleanups that are protective now may be affected by future climate-related conditions. Severe weather may disrupt brownfield redevelopment areas by impacting transportation, energy systems, food supplies, and other critical networks:

Brownfield revitalization can provide an excellent opportunity to address climate change locally. Brownfield revitalization can support sustainable strategies, including renewable and clean energy development, urban agriculture, green infrastructure, flood mitigation, LEED- and green-building techniques, transit-oriented and walkable neighborhoods, and the expansion of parks and recreational spaces. Reuse of brownfields as green space or urban forests can reduce the overall effects of carbon emissions by increasing foliage and creating carbon sinks. Incorporating green infrastructure or green buildings within brownfields redevelopment projects can increase stormwater retention, thereby lessening the potential impacts of flooding due to climate change. Taking climate change into consideration, building codes and permitting requirements can be adapted and incorporated into brownfields area-wide plans to enhance a community's resilience to climate change.

In 2015, EPA convened a group of brownfields stakeholders from state and local governments, community groups, nonprofits, academia, the private sector, and philanthropy to identify issues and challenges affecting communities impacted by brownfields. This effort culminated in the April 16, 2015, **Forum for Action**, which brought together leading organizations and stakeholders to help EPA's Office of Brownfields and Land Revitalization (OBLR) develop an agenda for action that will foster the next generation of brownfields and community revitalization.

Participants agreed that communities need guidance and support on how climate adaptation and mitigation approaches can better integrate with brownfield revitalization efforts. In 2015-2016, OBLR will:

- Foster *stakeholder collaboration* on climate smart brownfields.
- Issue a **Resource Guide** for climate smart brownfields.
- Offer *technical assistance* to brownfield grantees on climate smart approaches.

Climate Smart Brownfields:

Recognizing that climate change mitigation, adaptation, and resiliency will play an increasing role in brownfields cleanup and redevelopment efforts in the coming decades, EPA is taking proactive steps to ensure that stakeholders involved in brownfield revitalization consider the potential impacts of climate change. EPA's Office of Brownfields and Land Revitalization (OBLR) is developing tools and providing assistance to help communities incorporate climate change mitigation, adaptation, and community resilience into brownfields efforts. Beginning in 2015, EPA will foster climate smart brownfield strategies to promote the next generation of brownfield revitalization by:

(1) Enhancing Collaboration on Climate Smart Brownfields

OBLR will foster stakeholder engagement and collaboration on strategies for addressing climate change among several EPA program offices (including OBLR, the Office of Sustainable Communities (which includes EPA's smart growth initiatives), the Office of Water, and the Office of Air and Radiation), other federal agencies engaged in climate mitigation and resiliency, nonprofit organizations working on these issues, brownfield grantees, and other stakeholder groups. The goal is to break down barriers on these challenging issues, identify best practices and resources, and foster partnerships to tackle these issues and opportunities.

(2) Issuing a New Resource Guide for Climate Smart Brownfields

Drawing on existing and emerging resources on these issues, OBLR will develop and issue a *Resource Guide for Climate Smart Brownfields* that provides valuable background information, case studies and best practices, and a robust guide to resources and tools on climate smart brownfield strategies. This resource guide will explain how climate change can impact brownfields, and how innovative brownfield revitalization approaches can be part of the solution on climate mitigation, adaptation, and local resilience efforts.

The guide will provide information on factors to consider and steps to take when assessing how to make brownfields projects responsive to current and future climate change conditions. These factors will include strategies for taking potential climate change conditions into consideration when evaluating brownfield cleanup alternatives; considering the potential impacts of climate change conditions on vulnerable populations and tribes; making forward-looking decisions related to land use and building codes that factor in potential climate change conditions; and reducing emissions through sustainable approaches on brownfield sites. The *Resource Guide for Climate Smart Brownfields* also will include a robust, annotated listing of informational resources and tools that brownfields practitioners can use when addressing the topics discussed in the guide.

(3) Offering Technical Assistance to Brownfields Grantees

OBLR will offer technical assistance to brownfields grantees on ways to incorporate climate smart elements into their brownfields projects, using a variety of mechanisms that may include educational webinars, resource guides (as described above), and assistance through Technical Assistance for Brownfields (TAB) grantees and other mechanisms.

*For information on EPA's Climate Smart Brownfields initiative,
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