BF AWP GRANTEE CHECKLIST:

How to Address Changing Climate Concerns in Your Brownfields Area-Wide Planning Project

Our climate is changing, and we need to adapt to make sure that our efforts to clean up, reuse and revitalize our communities' land, air, and water resources are appropriate and effective now and into the future.

EPA wants to help communities ensure that the local decisions they make about assessing, cleaning up and redeveloping brownfields are protective of human health and the environment as the climate changes. As part of the Brownfields Area-Wide Planning (BF AWP) grant program, grantees have a particularly good opportunity to carefully consider how changing climate conditions at the local level should influence property cleanup and redevelopment decisions over the long term.

This checklist is intended to help grant recipients meet the following grant term and condition for "Climate Change Considerations," starting with the FY13 BF AWP recipients:

> As recipients develop the brownfields area-wide plan and implementation strategy, they must consider whether the proposed reuses for brownfield site(s) and other land in the project area are appropriate, given local changing climate conditions (e.g., sea-level rise, site proximity to a flood plain, likelihood of increased major storm events, drought conditions, etc.).[1]

Examples of changing climate conditions include, but are not limited to:

- Increased/decreased temperatures
- Increased/decreased precipitation
- Extreme weather events (e.g., storms of unusual intensity, increased frequency and intensity of localized flooding events, drought conditions)
- Increased risk of wildfires
- Changing dates for ground thaw/freezing
- Rising sea level
- Changing flood zones
- Changing environmental/ecological zones
- Increased salt water intrusion
- Higher/lower groundwater tables

Key portions of a brownfields area-wide plan typically include information on existing conditions of the project area, including environmental and public health considerations, site and area infrastructure conditions, economic analysis and market potential for site cleanup and reuse.

Changing climate conditions and risk factors should be included as part of the research on project area existing conditions, so that these considerations are better understood and taken into account during the evaluation of proposed cleanup and reuse options for brownfields and surrounding land uses in the project area. Both current and forecasted climate changes will affect the long-term safety, stability and suitability of the proposed land reuses, and may influence how the brownfields area-wide plan is implemented.

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[1] Full text of the Climate Adaptation Term and Condition: As recipients develop the brownfields area-wide plan and implementation strategy, they must consider whether the proposed reuses for brownfield site(s) and other land in the project area are appropriate, given local changing climate conditions (e.g., sea-level rise, site proximity to a flood plain, likelihood of increased major storm events, drought conditions, etc.). Recipients may additionally consider the degree to which the proposed reuses in the project area can be designed to reduce greenhouse gas discharges, reduce energy use or employ alternative energy sources, reduce volume of wastewater generated/disposed, reduce volume of materials taken to landfills, reduce stormwater run-off, improve air quality, and recycle and re-use materials generated during the cleanup and reuse process, to the maximum extent practicable.

Climate Change Adaptation Considerations to Address During the BF AWP Process:

- ❑ Review an authoritative resource (e.g., USGS Web site, state or local resources) to identify observed and potential changing climate conditions for the area in which the BF AWP project is located.
- ❑ Given the pertinent climate change concerns, identify potential risk factors, taking into account known conditions of the project area (e.g., proximity to the ocean, infrastructure vulnerabilities, property affected by a revised FEMA flood plain map, vulnerability related to changes in frequency and intensity of precipitation events, vulnerability of soil type due to moisture and hydraulic changes, ground and surface drinking water vulnerabilities). Ask community members to share their concerns about how changing climate conditions may affect the project area.
- ❑ Prioritize sites and infrastructure for investment and reuse. Does your community have or intend to develop planning materials for climate change hazard mitigation? If so, please leverage these other planning efforts within your community when prioritizing sites.
- ❑ When discussing with your community the various cleanup and reuse options for each of the catalyst, high-priority brownfield sites in your project area, include an evaluation of how well each option can accommodate the identified climate change risk factors. Remember to consider all stages of the redevelopment and long-term reuse of the site, and any project area revitalization strategies that can help the area adapt to changing climate conditions. You may also want to consider the degree to which a proposed remediation or reuse can be optimized for resource efficiency and community benefits.

Note: EPA does not expect grant recipients to generate new site-specific climate change measurements to complete this analysis. However, BF AWP grant recipients must demonstrate they have reviewed available current and authoritative information for the analysis of appropriate cleanup and reuse options. The level of analysis expected depends on the complexity of the brownfield sites and other project area conditions, and the degree of risk involved given the climate change concerns identified.

Examples of Federal Resources to Identify Current and Potential Changing Climate Conditions:

- Climate Resources on Data.gov: **http://www.data.gov/climate/**
- U.S. Global Change Research Program (USGCRP): **http://www.globalchange.gov/resources/federal-agency-adaptation-planning-resources**
- USGS Climate Land Change Science Program: **http://www.usgs.gov/climate_landuse/lcs/**
- Federal Government Web site: **https://www.fedcenter.gov/programs/climate/**
- FEMA Map Service Center: **https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1**
- U.S. EPA Web site: **http://www.epa.gov/climatechange/**
- U.S. Tool Kits for Public Officials: **http://www.epa.gov/climatechange/impacts-adaptation/adapt-tools.html**
- U.S. EPA's Office of Water's Stormwater Calculator Climate Assessment Tool: **http://www.epa.gov/nrmrl/wswrd/wq/models/swc/**
- U. S. EPA – Green Infrastructure for Climate Resilience Resources: **http://water.epa.gov/infrastruture/greeninfrastructure/climate.res.cfm**
- U.S. EPA – Superfund Climate Resources: **http://epa.gov/superfund/climate change/resources**
- National Climate Assessment: **http://nca2014.globalchange.gov**

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