

Urban Heat Island Mitigation Task Force

The Urban Heat Island Mitigation Task Force seeks an Environmental Protection Agency (EPA) grant program for municipal parking authorities to use targeted planting of shade trees in parking lots to mitigate urban heat island effect. The purpose of the program is to curb climate change by reducing ambient temperatures in cities. Shade trees not only create more pleasing environments for shoppers, but also mitigate urban heat island effect by preventing asphalt and concrete from supercharging and creating a mini-ozone layer.

Neither ACT nor EPA is aware of any specific federal legislation that authorized EPA to research heat islands and their mitigation. To the best of our knowledge, EPA's efforts to promote heat island mitigation in the early 1990s were part of a range of "no regrets" climate-related programs initiated by EPA during the Bush (Sr.) Administration. The pilot phase of the Cool Communities program, mentioned in the first U.S. National Action Plan for Global Climate Change (published in December 1992), was launched during that time. The 1993 U.S. Climate Action Plan, released during the Clinton Administration, directed EPA, USDA, and DOD and their industry partners to take Cool Communities beyond the pilot stage.

EPA

- Create the Urban Heat Island Mitigation Program with related guidelines. Mandate that all agencies that receive federal funds from this program implement the latest Urban Heat Island Mitigation Program guidelines. Consultation during the development of these guidelines must be provided by Technical Advisory Committees that are composed of local planning and ISA certified arboricultural experts and utilize the American Planning Association design standards. Science-based tree-siting guidelines should ensure that trees are not planted in locations that will disrupt pre-existing infrastructure or damage power lines. The program will also create an educational campaign that highlights the synergies between trees and urban heat island mitigation, and emphasizes planting the right tree in the right place.
- Designate an applicable EPA department to collect information- or fund a national NGO such as the Alliance for Community Trees to create a reporting method that includes detail such as: rooftop and ground-level temperatures and existing urban forestry data related to neighborhoods and municipalities benefiting from this program. Require municipalities and other participating agencies to include an annual review that:
 - Compares surface temperatures with tree canopy cover.
 - Outlines a 10-year plan for including greening in urban heat island mitigation outreach efforts.
 - Establishes a goal for minimum greenspace or canopy cover and timetables within which to achieve those minimums in high-temperature or ozone-risk areas.
 - Designates a staff member responsible for tracking and educating intra-agency, partnering agencies, and local citizens.
- Encourage EPA to develop working partnerships that are aimed at increasing understanding of and communication with national and local urban forest organizations.

- That all municipalities or other participating agencies include a three-year plan for post-planting tree care as well as a minimum canopy cover goal for developments targeted to benefit from this program. At minimum, trees shall be selected and installed based on appropriate International Society for Arboriculture (ISA), American Planning Association (APA), and best management practices design guidelines and industry standards. The minimum canopy cover goal shall not be less than 40%.

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Implementation

- Create incentives that give preference to existing parking lots in neighborhoods with the hottest heat signatures. One approach could be to award grants on a competitive basis, and award points for location priority. A minimum of 50% of program funds must go towards expenses for plant materials and other green infrastructure expenses including tree space preparation, irrigation, and maintenance.
- Require priority in awarding grants to projects that meet a verified level of existing and projected surface temperatures and ozone, with additional points for more rigorous standards such as percentage of total development that is impervious surfaces.
- Establish incentives for municipalities to work with developers and big box retailers, especially for greening multi-level parking garages with greenroofs including trees to cool exposed rooftops, around the building perimeter with trees to reduce reflective heat, and on the building's sides with planter boxes for beautification (such as at Chicago O'Hare's garages).
- Require municipalities and other participating agencies to partner with a certified tree-planting organization(s) who will ensure proper tree planting, maintenance, and at least three years of plant survival or replacement.
- Require municipality planning commissions and other participating agencies to require developers, surveyors, and citizens to submit a site evaluation/analysis of all existing green infrastructure features along with their plans to each applicable planning board/commission. At minimum, 20% of healthy trees must be preserved for urban heat island mitigation.

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Funding

- Incentives may be loans or grants to states or municipalities. Administered by the Environmental Protection Agency.
- Establish a federal revolving loan fund for greening-energy partnerships, and/or offer a federal match to municipalities with revolving loan funds for such projects.
- Require a cost sharing match of 80/20 (federal to state/municipal/other non-Federal funds).
- As part of the American Recovery and Reinvestment Act of 2009, States have until June 17, 2009 to solicit green projects for the State Revolving Loan Funds unless at least 20% of their intended use plans are already green projects. "Green projects" is defined per EPA. No state match is required (never any project level match)

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