

CARBON BUFFERING PILOT PROGRAM

OVERVIEW

Through the treatment of vacant land near expressways with green infrastructure, “carbon buffers” absorb carbon dioxide, particulate matter, and other pollution stemming from vehicular traffic and exhaust. Together with The Greening of Detroit, the DFC Implementation Office identifies prioritized sites for carbon buffers based on public land availability, air quality measures, and the future land use of adjacent neighborhoods. The organizations also identify and request funding. The Greening of Detroit leads implementation.

OBJECTIVES

- Improve air quality in neighborhoods near expressways through the use of “carbon buffers,” or green infrastructure
- Reduce stormwater runoff to the combined sewer system in areas affected by combined sewer overflow (CSO) discharges into the Detroit River
- City beautification

IMPLEMENTATION STRATEGIES

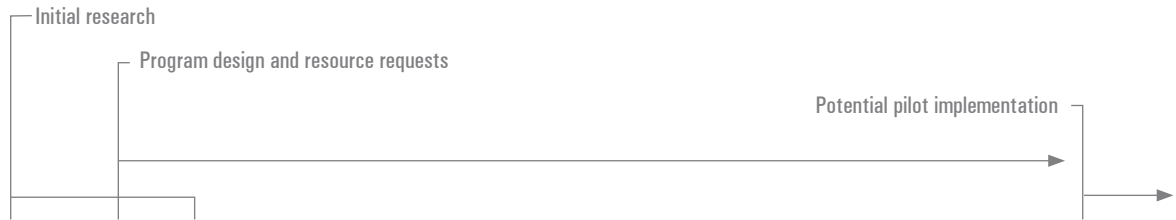
- E** LAND REGULATIONS, TRANSACTIONS, AND ENVIRONMENTAL ACTIONS
- D** CREATE NEW AND DIVERSE OPEN SPACE SYSTEM FOR THE CITY
- B** CREATE LANDSCAPES THAT WORK
- F** UTILIZE PRODUCTIVE LANDSCAPES AS THE BASIS FOR A SUSTAINABLE CITY
- E** MAKE LANDSCAPE INTERVENTIONS CENTRAL TO DETROIT’S RENEWAL

EVALUATION METRICS

- Improvement of various air quality measures in surrounding neighborhoods
- Reduction in air quality associated illness (e.g. childhood asthma) in surrounding neighborhoods

RESOURCES

TBD



INITIATIVE VITALS

CONTRIBUTING ORGANIZATIONS:

Detroit Water and Sewerage Department (DWSD), Southeast Michigan Council of Governments (SEMCOG), Detroit Future City, The Greening of Detroit

DFC INITIATIVE TYPE: Partner

DFC REPRESENTATIVE: Chris Dorle

INITIATIVE SCALE: 1-3 pilot areas near expressways

INITIATIVE DURATION: October 2013 – March 2014 program design and resources; April 2014 implementation pilot anticipated

RELEVANT PLANNING ELEMENTS:

Economic Growth, Land Use, City Systems, Neighborhoods, Land and Buildings Assets

DFC APPROACH

DFC identifies prioritized areas for carbon buffer pilot implementation, utilizing multiple criteria including public land availability, air quality measures, and the future land use of adjacent neighborhoods. DFC researches current MDOT restrictions on green infrastructure implementation in and around expressways. The Greening of Detroit evaluates proposed sites for implementation, and once consensus is reached, Greening (with support from DFC) pilots carbon buffer implementation. Based on the lessons learned from this initial pilot effort, DFC and Greening identify opportunities for large scale implementation, which includes a strategy for long-term public land acquisition.

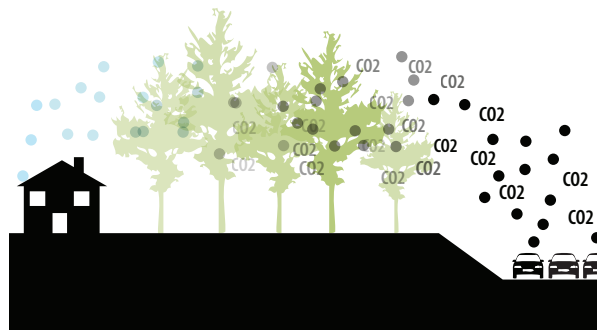
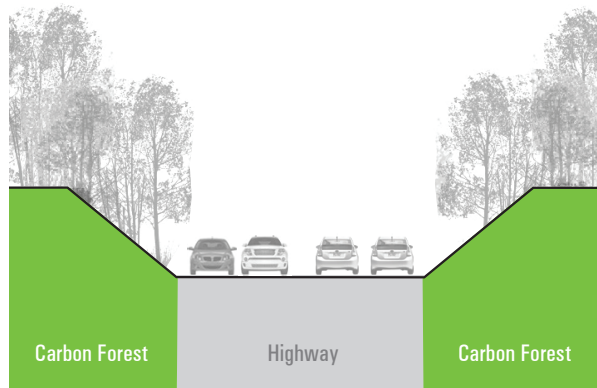


Image Source: Detroit Future City