Climate-Smart Cities
Green Infrastructure for Coastal Protection in Staten Island and Jamaica Bay

Holly Elwell, Senior Program Manager
June 14, 2016
Our Climate-Smart Cities Framework

Connect

Absorb

Cool

Protect
Targeted Strategies for Climate Justice

Social Research and Community Engagement

GIS Mapping

Public-Facing Apps
Program Objective: Help Cities Identify and Integrate Levers for Green Infrastructure

Multiple Benefit GI

Transit

Parks

Health

Water

Development
Delivering Climate-Smart Cities—Our Integrated Approach

Climate-Smart City Partnership

Demonstration

GIS Decision Support

Applied Research
Research: How Did GI and Social Networks Function to Mitigate Damage from Sandy?
Social Resilience Findings

• Ability to recover depends on:
  – Own resources and types of assets owned
  – Information
  – Access to social networks
  – Local organizations
  – Types of assistance

• **Insight**: Middle income homeowners seem to be the most vulnerable and the least recovered group. Income does not play the “expected” role.
GI Assessment Findings

- Natural areas matter
- Different natural areas matter in different places in different ways

**Insight**: Trees provide protection against wind and flying debris
GIS: Online Portal for Decision Support from Project Selection to Policy Measures

- Sea Level Rise and Storm Surge
- Waterfront Features—Natural and Built
- Demographic Vulnerabilities
- Existing Plans and Strategic Criteria
Portal: Use Data to Model Priorities
Applying Data to Decision-making

**Neighborhood Context**
- Create citywide or neighborhood maps identifying priorities

**Site Analysis**
- Review specific parcels for fit based on identified objectives

**Site Selection**
- Query the data to identify parcels that match criteria for risk and opportunity
- Create citywide or neighborhood maps identifying priorities
## Site Analysis

- Review specific parcels for fit based on identified objectives
### Site Analysis

- Review specific parcels for fit based on identified objectives
Site Selection

- Query the data to identify parcels that match criteria for risk and opportunity
Green Infrastructure
Schoolyards

Green Alleys

Connective Corridors/
Linear Parks

Community Agriculture

Water-Smart Parks

TPL Green Infrastructure Project Typologies
Thank You!
Holly Elwell
Senior Program Manager, Climate-Smart Cities
holly.elwell@tpl.org

Access the tool at:
https://web.tplgis.org/NYC_CSC/secure/viewer/