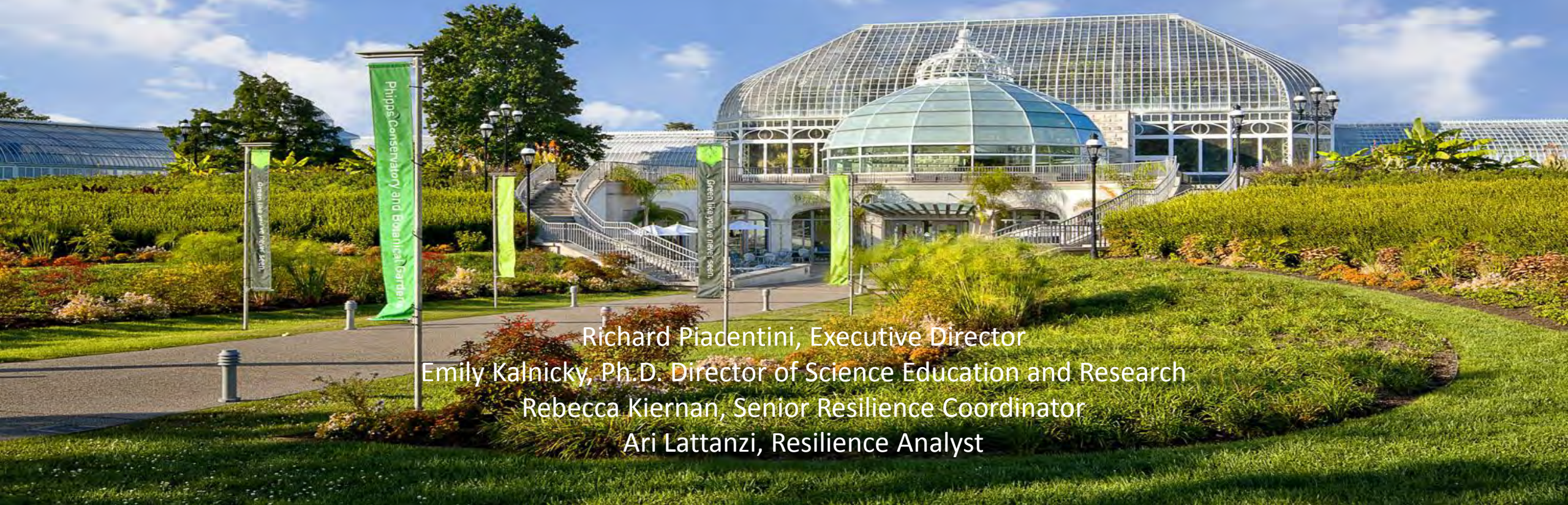




# Biophilic Pittsburgh



Richard Piadentini, Executive Director  
Emily Kalnicky, Ph.D. Director of Science Education and Research  
Rebecca Kiernan, Senior Resilience Coordinator  
Ari Lattanzi, Resilience Analyst



# Overview

- Introduction to Biophilic Cities movement
- Introduction to what other cities are doing
- Role of Biophilic Network at Phipps
- Introduction with Biophilic Organization Directory and event/volunteer listings
- Resilient Pittsburgh & Biophilia: City priorities
- Q & A
- Inventory of existing project and programs
- Wrap up and next steps

# Biophilia





# Biophilic Cities Movement

# Biophilic Cities Network goal

- ***Connect** people all over the world, both ordinary citizens and urban leaders, desiring to welcome more nature, and greater love of nature, into urban life. The network will **complement** existing networks and organizations, and offer a unique opportunity to **share** best practices and **develop** a stronger global attitude toward embracing nature in cities.*
- *Adopt a **holistic view** of the definition of “nature,” embracing all aspects of urban ecology, from the tiniest invisible microbes, to urban wildlife habitats, to increasing our connection with the wonders of the night sky.*

# Partner City Requirements

- Adopt an official resolution or other instrument
- Prepare a Biophilic Cities narrative statement
- Select and commit to monitoring a minimum of five indicators
- Designate a Biophilic Cities contact/coordinator
- Meet additional expectations as outlined in the document

Partner City status is initially awarded for 2 years and then renewable for periods of 2-5 years.

# Partner City Requirements

- Adopt an official resolution or other instrument
- Prepare a Biophilic Cities narrative statement
  - Current things that already make the city biophilic
  - Goals and aspirations for the future with specific steps the city will undertake to enhance nature or the position of nature in the community

# Partner City Requirements

- Select and commit to monitoring a minimum of five indicators across 4 categories:
  - Natural conditions, qualities, infrastructure
  - Biophilic engagement, participation, activities, and knowledge
  - Biophilic institutions, planning and governance
  - Human health/well-being
- Designate a Biophilic Cities contact/coordinator
- Meet additional expectations as outlined in the document



# Partner City Requirements

- Natural conditions, qualities, infrastructure
  - Percent city population living (or working) within 300 meters of a green space, park, or other natural element
- Biophilic engagement, participation, activities, and knowledge
  - Percent population visiting parks or green spaces daily
- Biophilic institutions, planning and governance
  - Percent city budget devoted to nature conservation, restoration, education
  - Existence of a biophilic cities strategy, action plan, or the equivalent (e.g. a biodiversity action plan, green infrastructure plan or element in local comprehensive plan)
- Human health/well-being indicators
  - Measurable progress made to overcome inequitable or unfair distributions of urban nature through planning. An example might be increasing tree canopy coverage in neighborhoods with vulnerable populations.



# Biophilic Cities- What's currently being done

## Partner Cities- Grandfathered in

- Milwaukee, WI
- Phoenix, AZ
- San Francisco, CA
- Portland, OR
- Wellington, New Zealand
- Birmingham, UK
- Oslo, Spain
- Victoria-Gasteiz, Spain
- Singapore
- Montréal, Quebec
- Rio de Janeiro, Brazil

# Current Biophilic Cities- Grandfathered in

## Phoenix, AZ

- Conserving 17,000 acres of desert land (1/3 of the city's land); will be largest urban park
- Maintained by volunteers of the McDowell Sonoran Conservancy

## San Francisco, CA

- Open spaces planning efforts (collaboration of city planning, Mayor's office, Parks and Rec and other city agencies)
- Pavement to parks (collaboration dept of public works, planning, and municipal transit)



# Current Biophilic Cities- Grandfathered in (continued)

## Wellington, New Zealand

- Biophilic team as part of the city council
- 80-90 rain gardens around the city
- Zealandia sanctuary- community driven eco-restoration project and educational facility
- Waitangi Park- wetland area treating stormwater and providing ecological habitats

# Partner Cities- New adopters

- Philadelphia, PA
- Washington DC

# Current Biophilic Cities- New Adopters

## Washington, DC

- Signed resolution to set tone for future city projects
- Engage city council and government
- Focus more on biodiversity (not just green buildings)

## Philadelphia, PA

- Launched in May 2015 with presentations by Tim Beatley and Bill Browning
- No resolution, working on a consensus statement
- Slogan: “BioPhilly, Growing Beyond Green” Beyond green= combining sustainability with health
- Mayor’s Office of Sustainability



# Role of Biophilic Network at Phipps



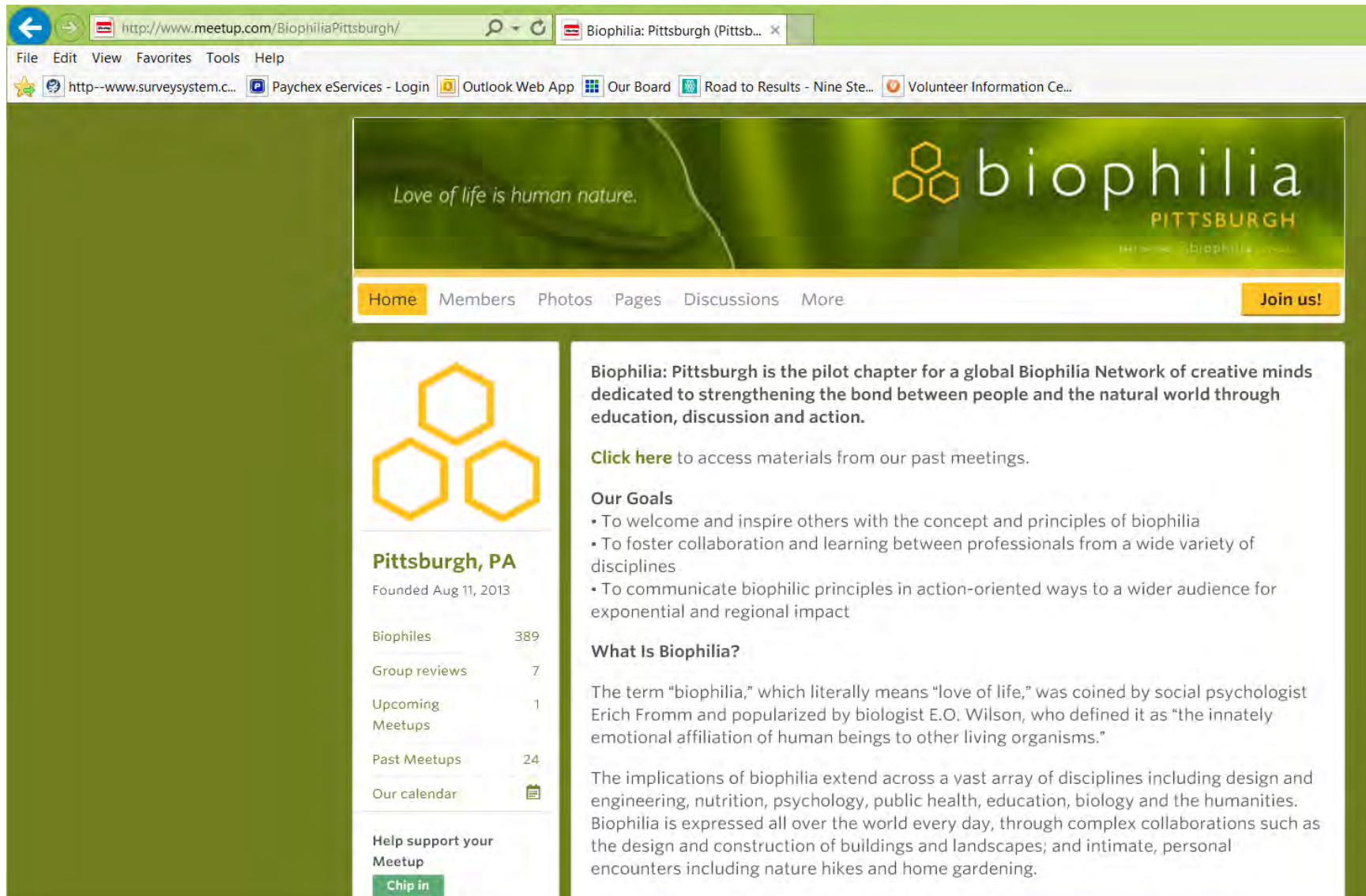
*“To inspire and educate all with the importance and beauty of plants; to advance sustainability and promote human and environmental well-being through action and research; to celebrate its historic glass-house”*





PHIPPS

# Biophilia Pittsburgh Network



The screenshot shows a web browser window with the URL <http://www.meetup.com/BiophiliaPittsburgh/>. The browser's address bar and tabs are visible at the top. Below the browser window, the Meetup page for Biophilia Pittsburgh is displayed. The page has a green header with the text "Love of life is human nature." and the Biophilia Pittsburgh logo. A navigation bar includes links for Home, Members, Photos, Pages, Discussions, and More, along with a "Join us!" button. The main content area is divided into two columns. The left column features the Biophilia Pittsburgh logo, the location "Pittsburgh, PA", the founding date "Founded Aug 11, 2013", and a table of statistics. The right column contains a description of the group, a link to past meetings, a list of goals, a definition of biophilia, and a paragraph about the implications of biophilia.

http://www.meetup.com/BiophiliaPittsburgh/ Biophilia: Pittsburgh (Pittsb...


File Edit View Favorites Tools Help

http--www.surveysystem.c... Paychex eServices - Login Outlook Web App Our Board Road to Results - Nine Ste... Volunteer Information Ce...


Love of life is human nature.

biophilia  
PITTSBURGH

Home Members Photos Pages Discussions More Join us!



**Pittsburgh, PA**  
Founded Aug 11, 2013

Biophiles	389
Group reviews	7
Upcoming Meetups	1
Past Meetups	24
Our calendar	

Help support your Meetup  
[Chip in](#)

**Biophilia: Pittsburgh** is the pilot chapter for a global Biophilia Network of creative minds dedicated to strengthening the bond between people and the natural world through education, discussion and action.

[Click here](#) to access materials from our past meetings.

**Our Goals**

- To welcome and inspire others with the concept and principles of biophilia
- To foster collaboration and learning between professionals from a wide variety of disciplines
- To communicate biophilic principles in action-oriented ways to a wider audience for exponential and regional impact

**What Is Biophilia?**

The term "biophilia," which literally means "love of life," was coined by social psychologist Erich Fromm and popularized by biologist E.O. Wilson, who defined it as "the innately emotional affiliation of human beings to other living organisms."

The implications of biophilia extend across a vast array of disciplines including design and engineering, nutrition, psychology, public health, education, biology and the humanities. Biophilia is expressed all over the world every day, through complex collaborations such as the design and construction of buildings and landscapes; and intimate, personal encounters including nature hikes and home gardening.



Efficiency · Natural  
Organic Living ·  
Environmental  
Awareness · Green Home  
Design & Living &  
Landscaping ·  
Sustainable Architecture,  
Art & Interior Design

### People in this Meetup are also in:



Girl Develop It  
Pittsburgh

1,110 Members



Free and  
Almost Free in  
Pittsburgh

10,562 Pgh  
Cheapskates!



Country Barn  
Farm

154 Farmers



I Meditate  
Pittsburgh

1,034  
Meditators



The Pittsburgh  
Metaphysics  
Meetup Group

## Love of Life is Human Nature.

Upcoming 1

Suggested 0

Past

Calendar

### FEATURED MEETUP

## Biophilia: Pittsburgh January Meeting: Envisioning Biophilic Pittsburgh

Phipps Conservatory and Botanical Gardens  
1 Schenley Park, Pittsburgh, PA (map)



At our Jan. 7 Biophilia: Pittsburgh meeting, join Phipps Executive Director Richard Piacentini and Director of Science Education and Research Dr. Emily Kalnicky at a visioning session for "Biophilic Pittsburgh." Come for a lively conversation about all of the great biophilic initiatives already happening in the city and follow-up on the... [LEARN MORE](#)

Hosted by: Phipps C. (Organizer)

Thu Jan 7

5:30 PM

RSVP

30 going

1 comment

## Recent Meetups

December 3 · 5:30 PM

### Biophilia: Pittsburgh December Meeting



18 Biophiles | ★★★★★

## What's new



NEW RSVP

Matt W. RSVPed  
Yes for Biophilia:  
Pittsburgh January  
Meeting: Envisioning  
Biophilic Pittsburgh

6 days ago

NEW RSVP

Vino RSVPed Yes  
for Biophilia:  
Pittsburgh January  
Meeting: Envisioning  
Biophilic Pittsburgh

6 days ago

NEW RSVP

Mark W RSVPed  
Yes for Biophilia:  
Pittsburgh January  
Meeting: Envisioning  
Biophilic Pittsburgh

6 days ago

NEW RSVP

Pete J. RSVPed  
Yes for Biophilia:  
Pittsburgh January  
Meeting: Envisioning  
Biophilic Pittsburgh

December 20

NEW MEMBER





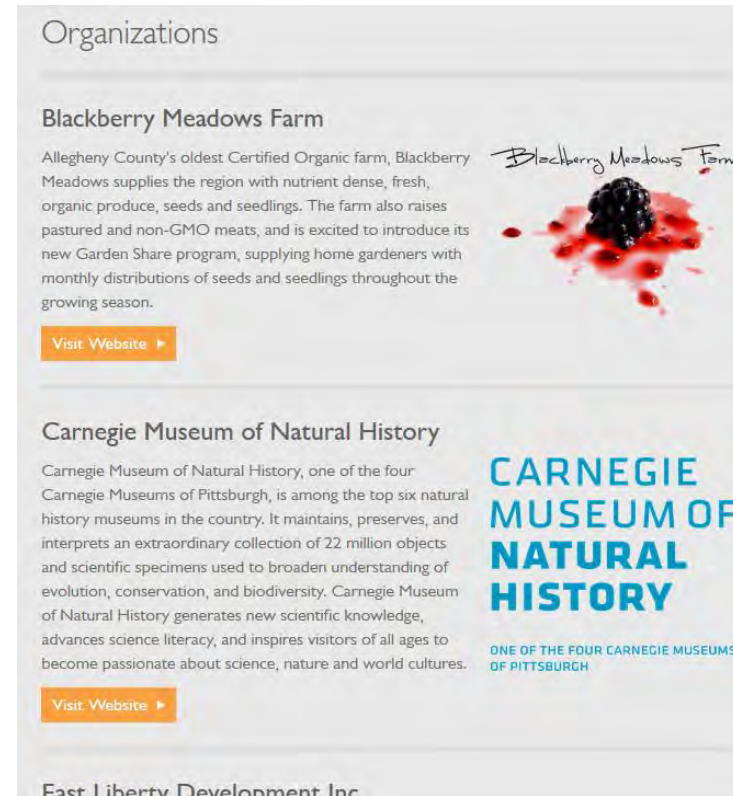


# Biophilic Pittsburgh Directory

# Biophilia: Pittsburgh Directory



- Listing of various organizations doing work related to biophilia



# Biophilia: Pittsburgh Directory

## Current organizations that have submitted information

- Blackberry Meadows Farm
- Carnegie Natural History Museum
- East Liberty Development Inc
- Fern Hollow Nature Center
- Friends of the Riverfront
- Grow Pittsburgh
- Learn Your Land
- Nine Mile Run Watershed
- The Outdoor Classroom
- Phipps Conservatory
- Pittsburgh Parks Conservancy
- Venture Outdoors

# Biophilia: Pittsburgh Events & Volunteer Opportunities

- Listing of events and volunteer opportunities related to biophilia
- Will be listed on the meetup page
- Interested in adding an event or volunteer opportunity? email: [biophilia@phipps.conservatory.org](mailto:biophilia@phipps.conservatory.org)

The screenshot shows the Meetup.com page for 'Biophilia: Pittsburgh (Pittsb...)'. The page has a green header and a navigation bar with links like 'Tools', 'Help', 'Paychex eServices - Login', 'Outlook Web App', 'Our Board', 'Road to Results - Nine Ste...', and 'Volunteer Information Ce...'. The main content area is divided into three columns. The left column lists categories: 'Efficiency - Natural', 'Organic Living -', 'Environmental', 'Awareness - Green Home', 'Design & Living & Landscaping -', and 'Sustainable Architecture, Art & Interior Design'. Below this is a section 'People in this Meetup are also in:' with three items: 'L.L.Bean Pittsburgh Outdoor Adventure Club' (2,476 Members), 'Pittsburgh Young Professionals Downtown' (1,052 Young Professionals), and 'Health 2.0 Pittsburgh' (712 Innovators). The middle column features a 'Love of Life is Human Nature.' header, a 'Upcoming 1' tab, and a 'FEATURED MEETUP' for 'Biophilia: Pittsburgh January Meeting: Envisioning Biophilic Pittsburgh' on 'Thu Jan 7' at 'Phipps Conservatory and Botanical Gardens' (1 Schenley Park, Pittsburgh, PA). The event description mentions a visioning session with Phipps Executive Director Richard Piacentini and Research Dr. Emily Kalnický. The right column shows 'What's new' with a list of new members: Sarah H. joined 7h ago, Michele M. joined 7h ago, Sunny joined Yesterday, Rachel M. joined Yesterday, and Genay H. joined Yesterday. At the bottom, there is a 'Recent Meetups' section for 'Biophilia: Pittsburgh December Meeting' on 'Dec 3, 2015 - 5:30 PM'.





# Resilient Pittsburgh

Biophilia

January 7, 2016





# Overview

- 
- An aerial photograph of Pittsburgh, Pennsylvania, showing the city skyline across the Allegheny River. The yellow arch bridges are prominent. In the foreground, a red trolley is visible on a track, surrounded by green trees. A semi-transparent white box is overlaid on the center of the image, containing a list of four topics.
- 1) Background on Resilience & ongoing initiatives
  - 2) Resilience & Biophilia: Co-Benefits
  - 3) City Priorities related to Biophilia
  - 4) Climate Change & Climate Compact



# What is resilience?

100 Resilient Cities defines urban resilience as **The capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.**

**Urbanization, Globalization & Climate Change**





# Key shocks and stresses

## Shocks

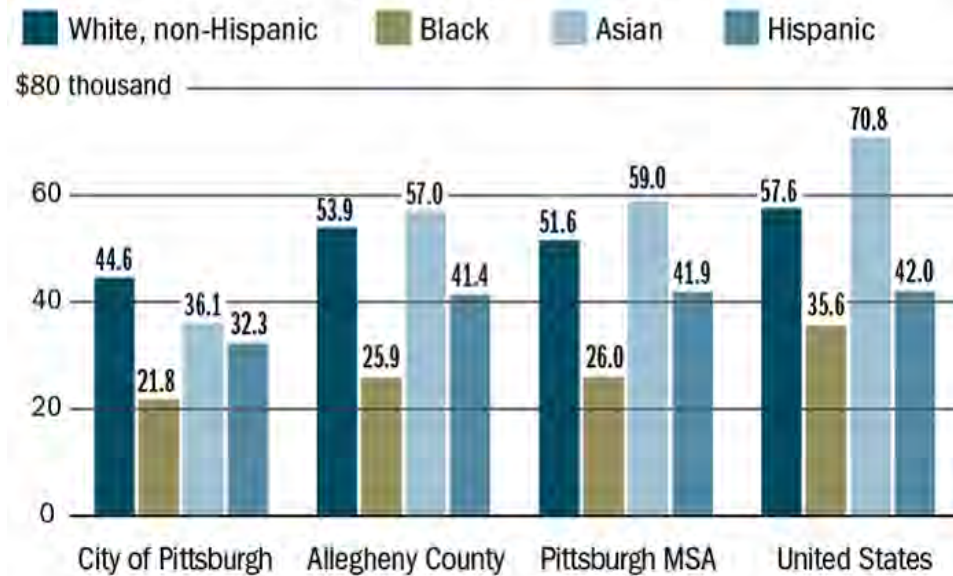
- Climate change and extreme weather
- Infrastructure failure
- Hazardous materials accident
- Landslide and subsidence
- Economic collapse

## Stresses

- Aging infrastructure
- Economic and racial inequity
- Environmental degradation
- Aging workforce
- Lack of mobility/transportation access
- Regional fragmentation

## Median household income disparities

Household income of whites is at least twice as high as that of blacks in Pittsburgh, Allegheny County and the metropolitan area, a far greater gap than occurs nationally, according to 2007-11 data.



Source: University of Pittsburgh Center on Race and Social Problems, based on U.S. Census Bureau American Community Survey

Post-Gazette

# Value of being a 100 Resilient Cities Network Member



1. Staffing capacity
2. Planning consultant: The RAND Corporation
3. Membership in network of 100 cities
4. \$5 million in pro bono services from platform partners



# **Long-Term Benefits of Resilient Pittsburgh Strategy**

**Elevate and amplify existing plans and initiatives**

**Target resource allocation**

**Attract and direct funding to support city priorities**

**Resilience dividend - 10% budget pledge**



# 100RC Project Plan has two phases

## Phase 1

**Fall-Winter 2015**

**Objective:**

- Evaluate state of resilience and city capacity, and generate broad support and engagement in discovery areas

**Process:**

- Data collection
- Stakeholder engagement

**Outcome:**

- ★ • Preliminary Resilience Assessment (PRA)

## Phase 2

**Winter-Summer 2016**

**Objective:**

- Deep, rapid expert analysis, and generation of solutions through a resilience lens. Practical action, and multiple benefit decisions made

**Process:**

- Focused analysis
- Generate solutions
- Prioritization

**Outcome:**

- City Resilience Strategy

## Implementation

# Extensive stakeholder engagement has informed the PRA

## Initial Workshop

(June, 2015)

160+ invited participants identified shocks & stresses, strengths & weaknesses of the city

## Focus Groups

(October, 2015)

Met with 50+ industry professionals:  
Philanthropy  
Business  
Neighborhood  
Civic  
Academic  
Regional

## Deliberative Forums

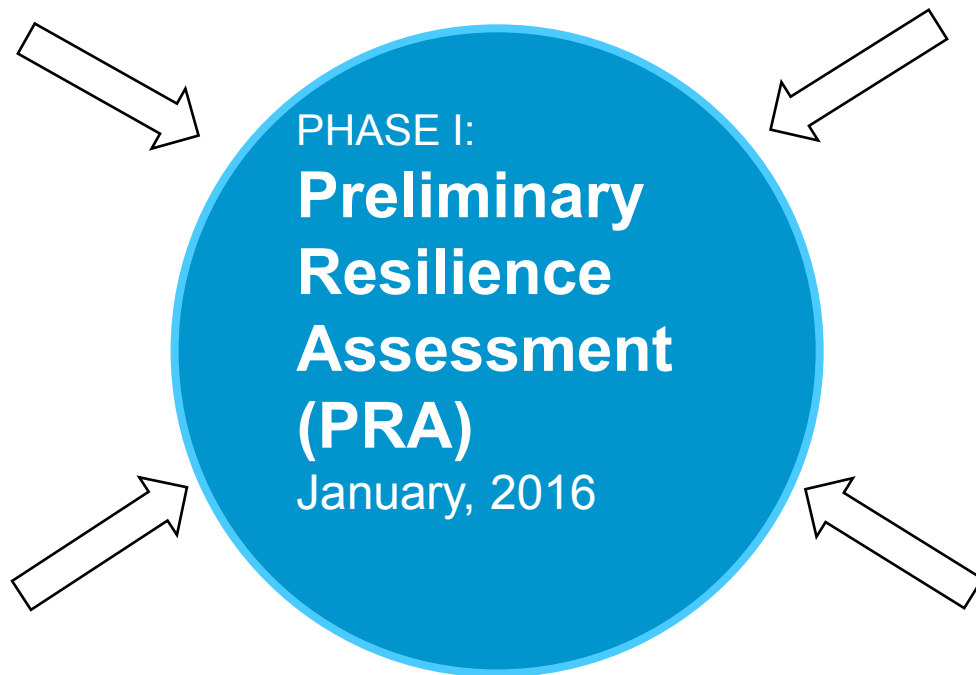
(November, 2015)

Two sessions, 140+ city residents to identify shock & stresses, strengths & weaknesses in city neighborhoods

## Stakeholder Perceptions

(October, 2015)

Workshop with 20 City department heads to dig into strengths, weaknesses and capacity of the City



# Stakeholders noted strengths and weaknesses of the city

## Strengths

- Natural, Economic and Social Assets
- Areas for improvement
- Inclusive Community Development
- Transportation, Zoning and Land Use
- Economic diversification

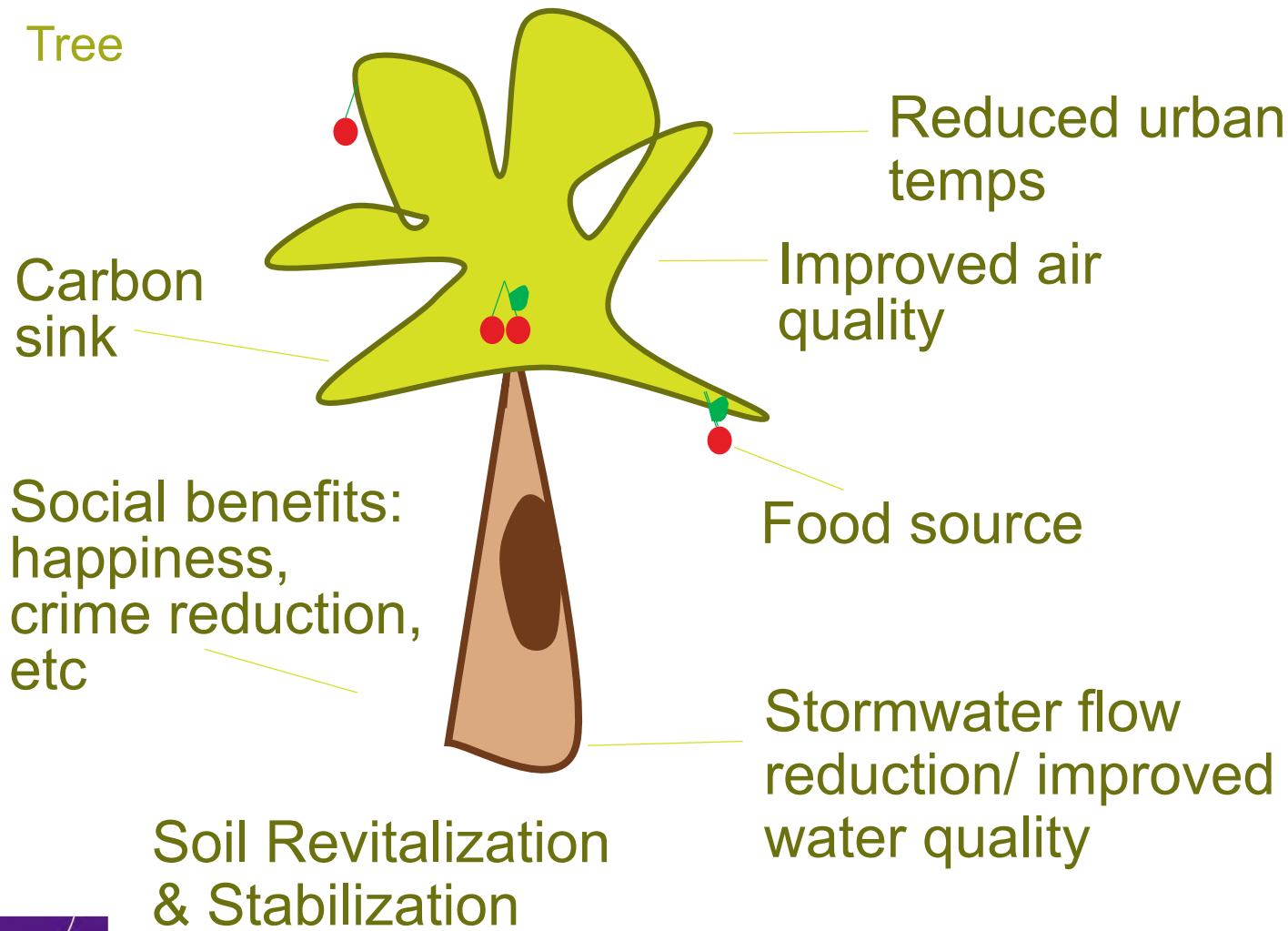
## Weaknesses

- Fragmentation
- Marginalized Populations
- Lack of Redundancy

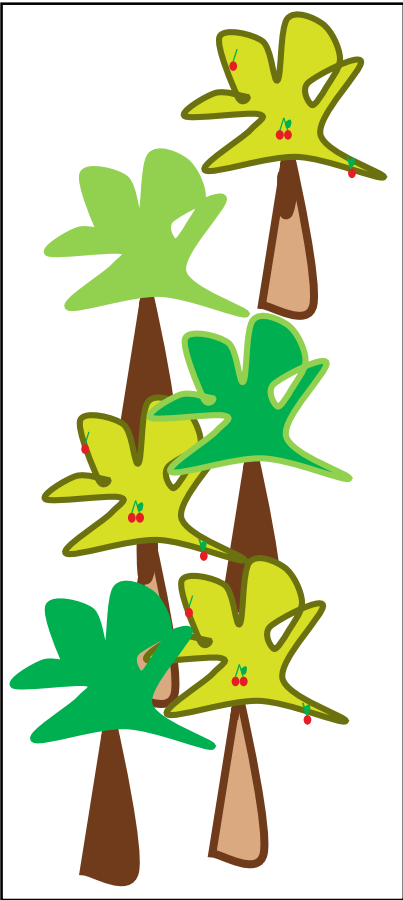


# Resilience and Biophilia: Co-Benefits

How can biophilic principles and projects reduce stresses and shocks in Pittsburgh?



- Many native trees
- Connects greenspaces
- Wildlife habitat
- Improved biodiversity
- Better resistance to biological threats



# City Priorities Related to Biophilia

PROJECTS	DESCRIPTION
<b>Open Space Plan - DCP</b>	Optimizing Pittsburgh's open space, parks and recreation system – manage green space, brownfields, vacant lots to create a green network
<b>CitiParks Initiatives</b>	Community Enrichment Programs, Farmer's Markets, Summer Camps
<b>Shade Tree Commission</b>	City of Pittsburgh commission to protect, maintain and restore trees in public land, rights of ways, and parks
<b>Green Infrastructure Plan</b>	Increase vegetation and reduce impervious surfaces to manage stormwater and improve water quality
<b>Connecting Children to Nature</b>	Pittsburgh applied for a grant to facilitate connecting 10,000 children from all 90 neighborhoods to nature
<b>EPA / ioby / TPL / GMF</b>	Organizations supporting Pittsburgh projects relating to biophilia, resilience and sustainability



# Resilience & Climate Change



## Mayor Peduto – 2030 Goals

- 100% renewable energy use
- 50% building energy use reduction
- 50% water use reduction
- 100% fossil fuel free fleet
- 100% waste diversion
- 50% transportation emissions reduction
- Divestment strategy



# Climate Action Plan 3.0 & Pittsburgh Climate Compact

## Climate Action Plan Groups

- Land Use & Transportation
- Buildings
- Energy & Utilities
- Water
- Waste
- Sequestration

## Pittsburgh Climate Compact

- Aggregate climate action commitments & progress
- 2030 Districts, GWC
- Hospitals, Schools, Utilities
- Track data & publish annually

# City of Pittsburgh Biophilia-Related Indicators

	PROJECTS	ANALYSIS
Completed phase of analysis	<b>iTree Analysis – shade trees (STC) and urban canopy (TreePGH)</b>	Analysis of all trees in the City- type, health, susceptibility, stormwater capture, CO2 storage
	<b>Key Performance Indicators</b>	Facilities-wide monitoring of indoor air quality, energy and water use, water quality, employee commute
	<b>Greenhouse Gas Inventory</b>	Measures GHG emissions in City facilities and City-wide
Beginning & on-going	<b>Open Space Plan</b>	Inventory of Open Space, access & proximity
	<b>Western PA Regional Data Center</b>	Open data from local government and community sources
	<b>Southwestern Pennsylvania Regional Indicators Report</b>	Report in 2004, considering which indicators to track in future reports
	<b>Pittsburgh Survey 2.0</b>	Comprehensive sociological study of Pittsburgh. 1907 seminal study focused on the people, place and work
	<b>EPA / USFS / ioby</b>	Mapping tool combining use of natural resources with stewardship programs and crowd-funding



Questions?



# Inventory of existing projects and programs

# City Priorities Related to Biophilia

PROJECTS	DESCRIPTION
<b>Open Space Plan - DCP</b>	Optimizing Pittsburgh's open space, parks and recreation system – manage green space, brownfields, vacant lots to create a green network
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<b>Connecting Children to Nature</b>	Pittsburgh applied for a grant to facilitate connecting 10,000 children from all 90 neighborhoods to nature



# Create an inventory of current projects and programs

- Use the sticky pads to write things you/your organization is already doing related to the 5 city priority areas
  - These can be current or planned initiatives
  - Try to be specific with numbers/stats if available
  - Use one sticky note per project or program
- Write out names of organizations that should be included in the directory

# Create an inventory of current projects and programs

- Go around the room and read what's been posted
- Take two strips of dots, and vote on your top 2 under ***each*** initiative
- When you're done voting, please have a seat



# Wrap up and next steps

## What's next?

- Compiling inventory generated today
- Compiling briefing for the Mayor
- Drafting official resolution
- Continued events and opportunities to be involved



## For more information:

- Ariel Lattanzi:  
[ariel.lattanzi@pittsburghpa.gov](mailto:ariel.lattanzi@pittsburghpa.gov)
- Rebecca Kiernan:  
[rebecca.kiernan@pittsburghpa.gov](mailto:rebecca.kiernan@pittsburghpa.gov)
- Dr. Emily Kalnicky:  
[ekalnicky@phipps.conservatory.org](mailto:ekalnicky@phipps.conservatory.org)
- Biophilia directory/events:  
[biophilia@phipps.conservatory.org](mailto:biophilia@phipps.conservatory.org)

