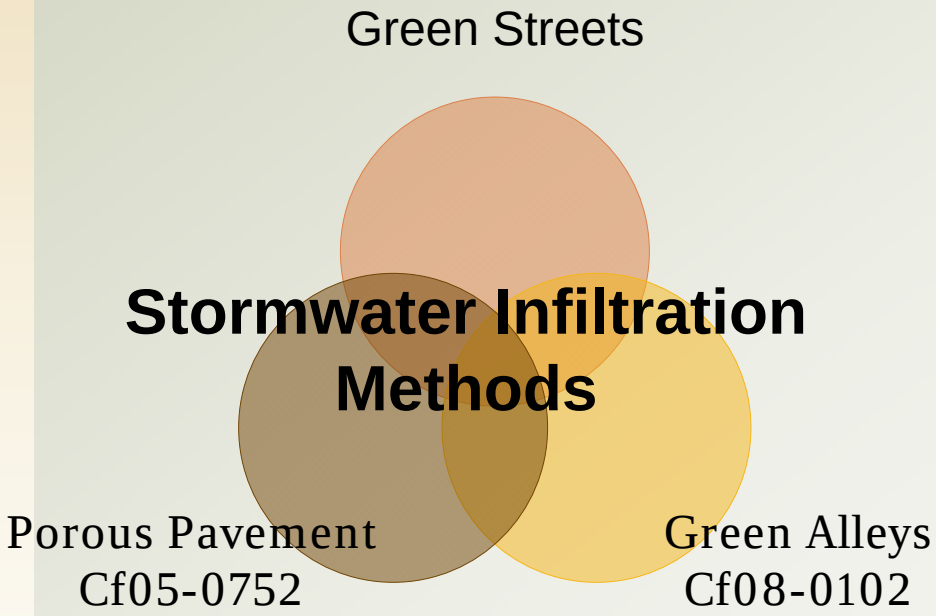
Green Infrastructure for Los Angeles:

Addressing Urban Runoff and Water Supply Through Low Impact Development

Council Motion 12.9.08



Today's action: to move forward a suite of recommendations from two separate motions and one informational item

Green Streets

Rainwater Harvesting (cisterns, downspout redirect)

Green Alleys

Porous Pavement

Multiple Green Infrastructure (LID) Goals and Methods

What is Low Impact Development?

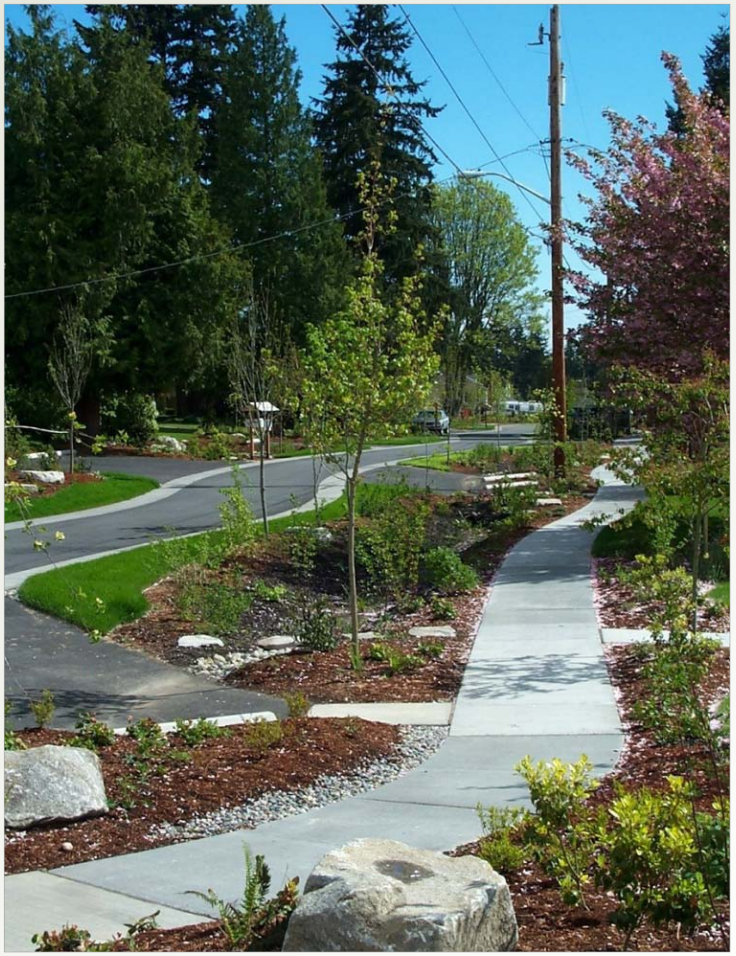
- LID is an integrated water management strategy that uses **natural processes** to capture, treat and infiltrate urban runoff throughout the watershed.

- LID has multiple benefits for cities—not just stormwater benefits.

Bioswales in downtown Los Angeles

Low Impact Development: Key Principles

- Infiltrate urban runoff at points distributed *throughout the watershed* (instead of channeling water into storm drains).
- Preserve natural hydrologic and ecosystem functions.



Street with bioswales in Redmond, WA

Low Impact Development: Key Principles

- Reduce impervious ground cover & building footprint.

West L.A. driveway with grass to increase permeability

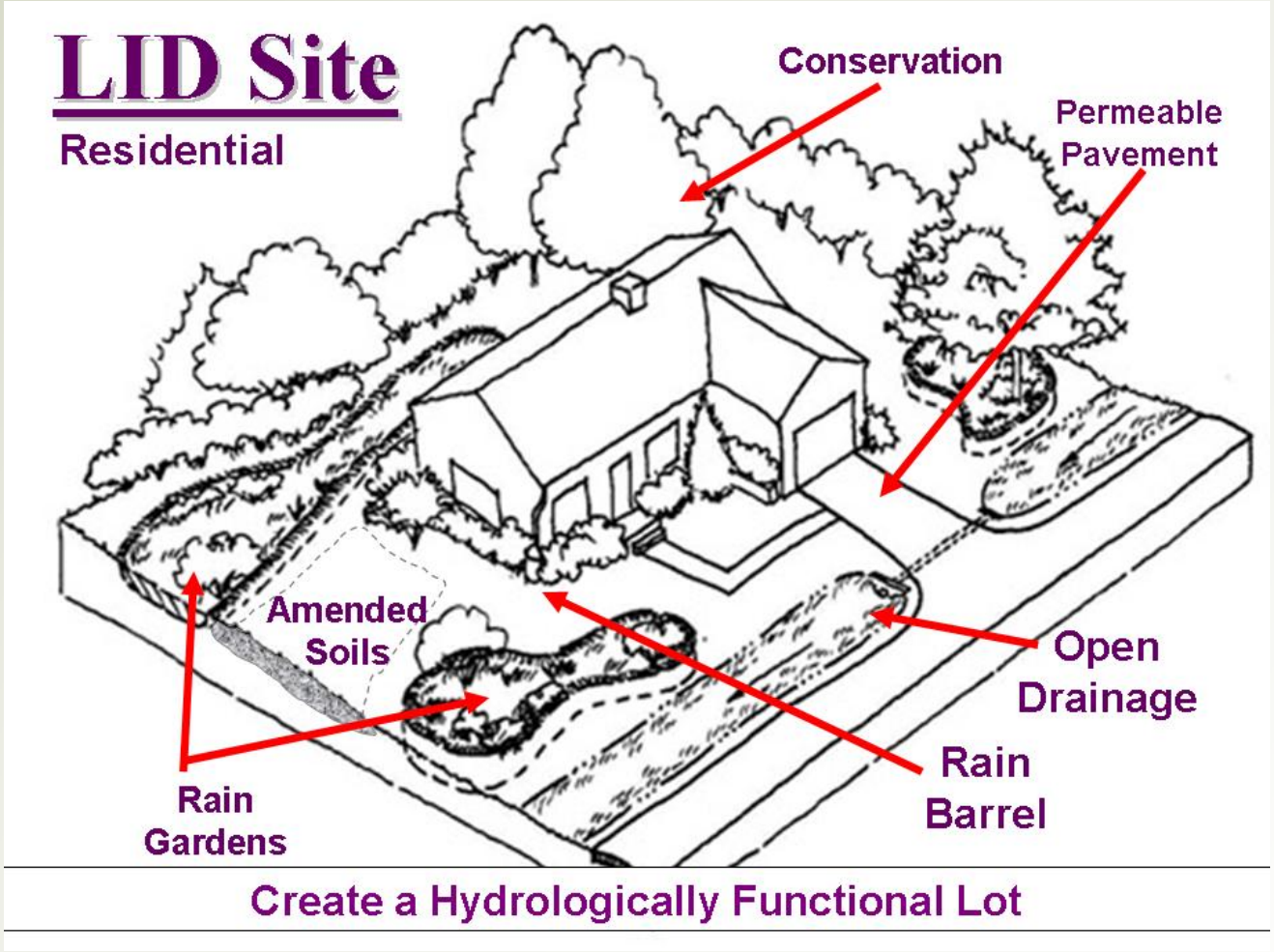
Low Impact Development: Key Principles

Bioswales, downtown Los Angeles

Cistern in Chicago

- Maximize on-site infiltration.
- If infiltration is not possible, then capture water to filter for reuse.

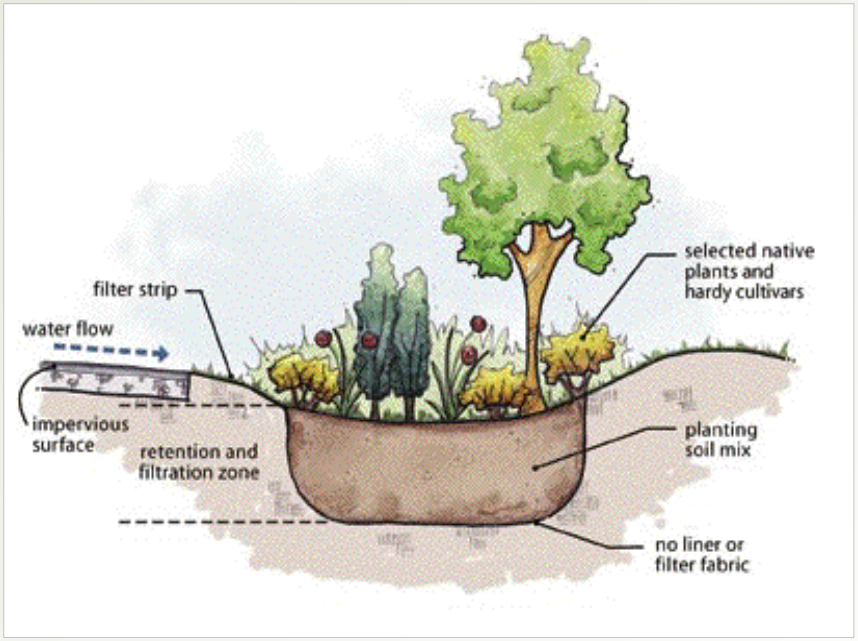
LID for a Residential Site



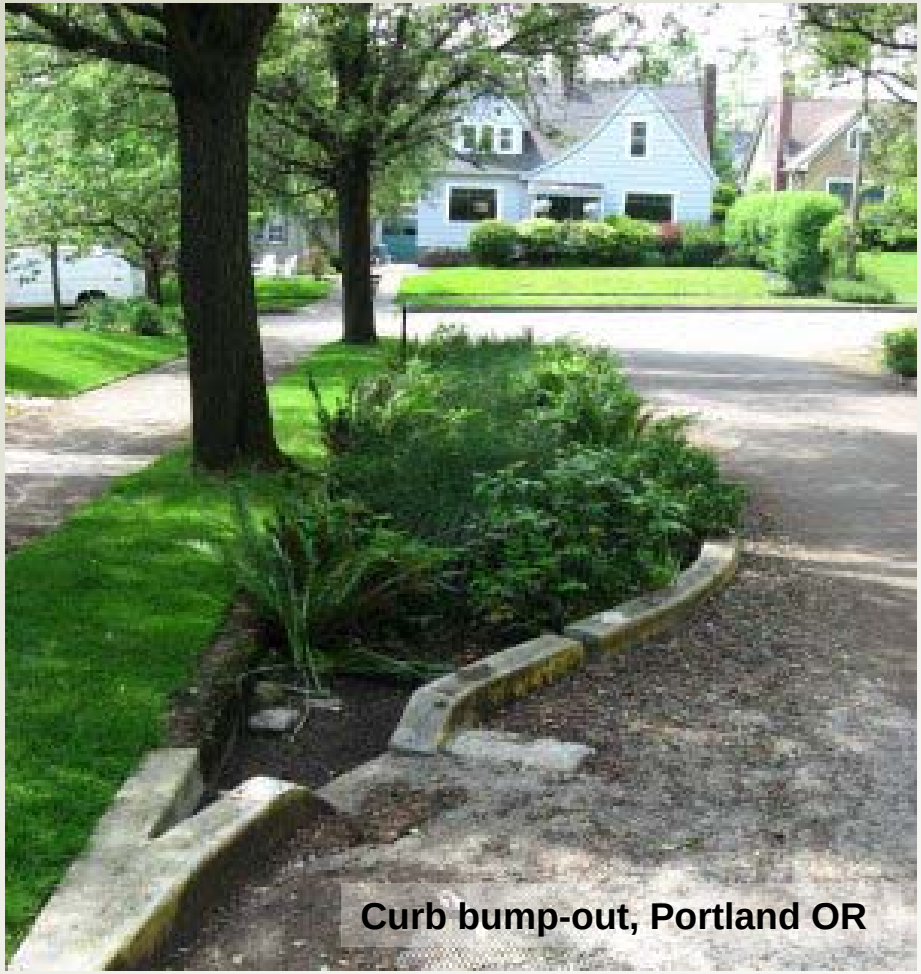
LID for a Commercial Site

Common LID Best Management Practices (BMPs)

Bioswale in Seattle



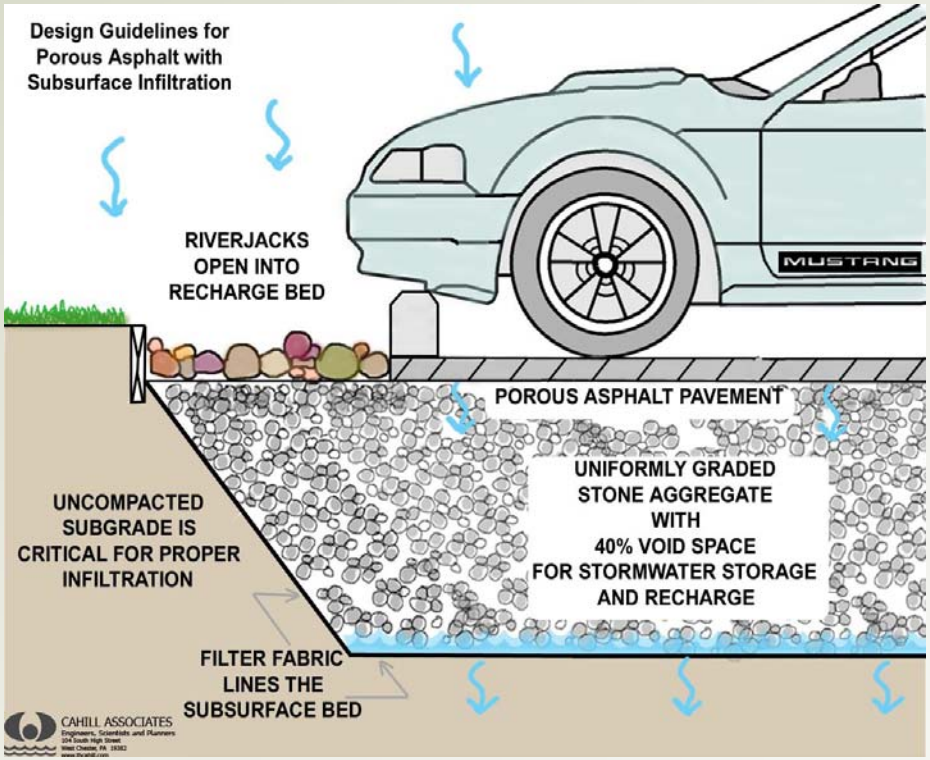
Common LID Best Management Practices (BMPs)



Curb bump-out, Portland OR

Rocky infiltration swale, British Columbia

Common LID Best Management Practices (BMPs)



Porous pavement / asphalt

Permeable pavers

Vegetated pavers

Benefits of LID

- LID offers promising solutions for a number of the city's pressing environmental concerns.
- Research has shown that widespread use of LID strategies throughout L.A. could be very beneficial.

Benefits of LID

Polluted Urban Runoff:

Nearly 40% of the county's needs for cleaning polluted runoff could be met by LID projects on existing public lands.

Community Conservancy International, March 2008

Benefits of LID

Water Supply:

LID projects in L.A. County could save 41,000—83,000 AF/year of imported water (through groundwater recharge and water capture & reuse).

NRDC, August 2008

Credit: David Jordan

Benefits of LID

Energy Use & Climate Change:

Greater reliance on local water supply instead of pumping from distant locations would save 72,000—233,500 MWH of energy per year.

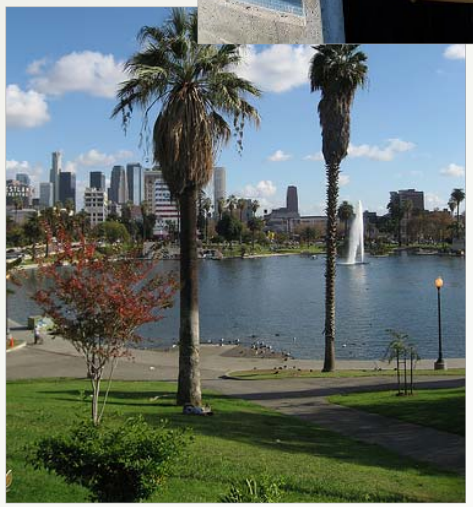
NRDC, August 2008

Benefits of LID

- Better flood control
- Reduced need for wastewater treatment
- Money saved on water management infrastructure
- Increased green space and wildlife habitat
- Reduced urban heat island effect
- Community beautification
- Emphasis on green jobs and economy

Flooding

Water Treatment

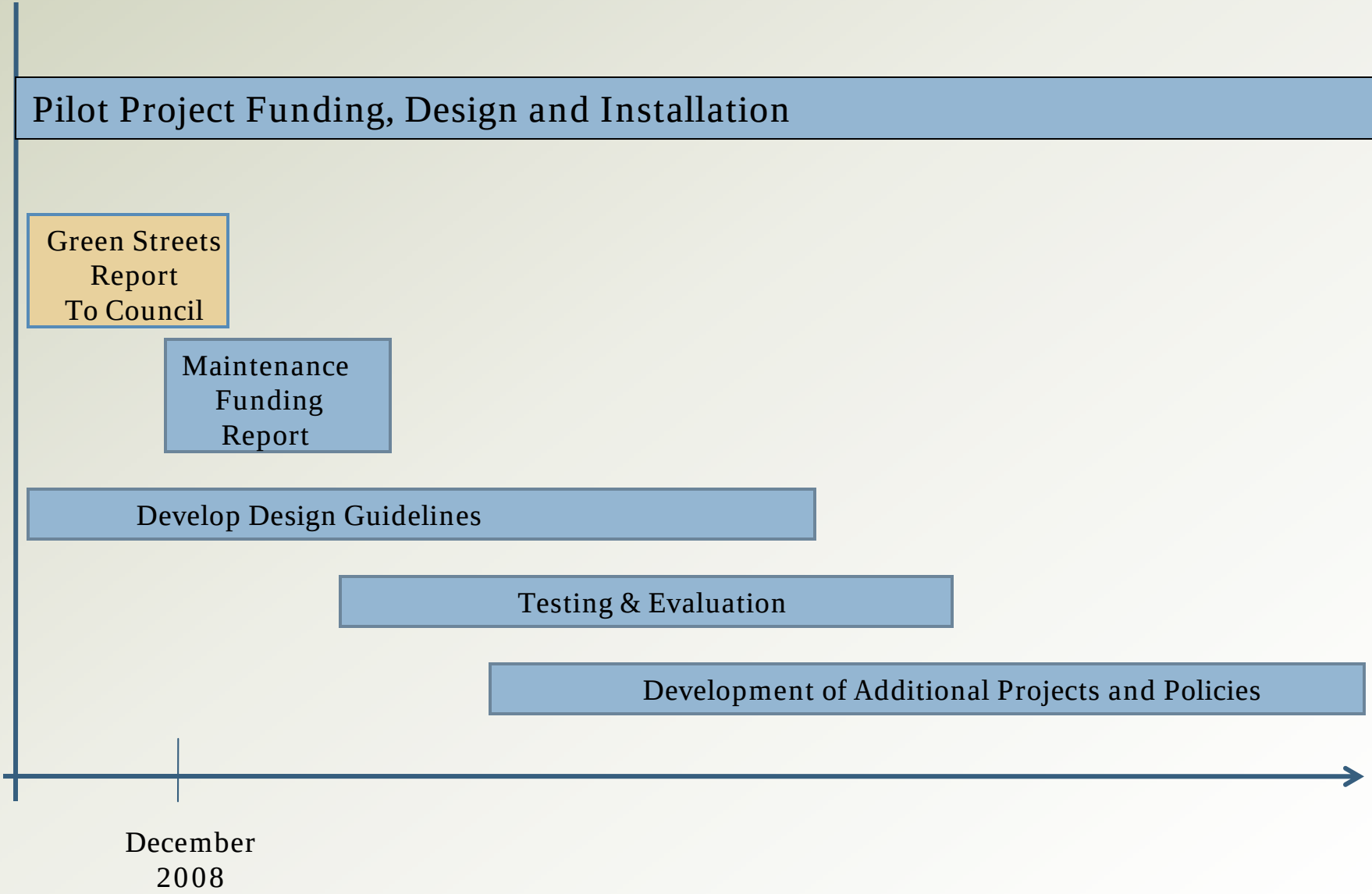


Green space

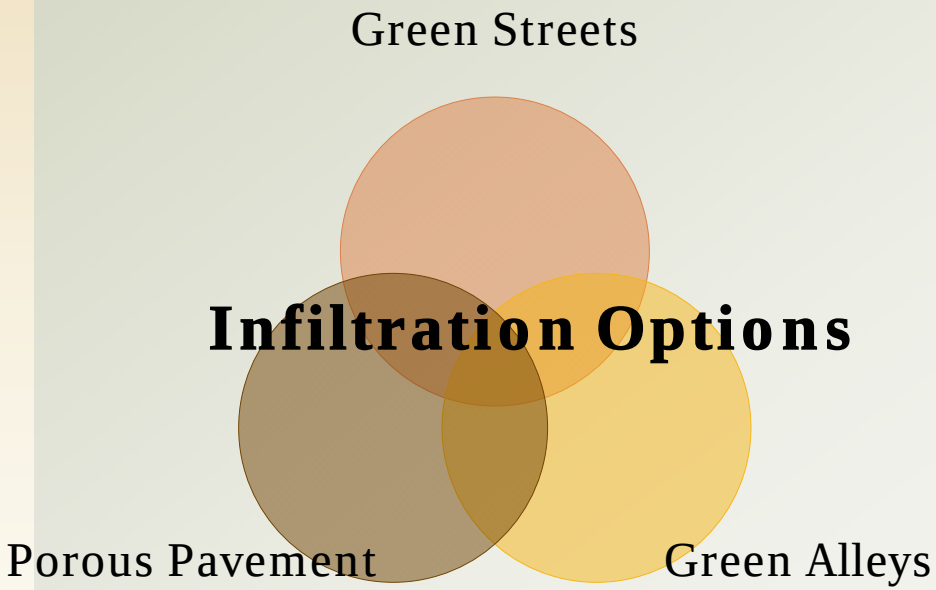
Funding

- Projects to be built as capital funding is made available
- Maintenance agreements with adjacent property owners
- Need: support for maintenance funds in general budget
- Partnership with Neighborhood Councils

Timeline

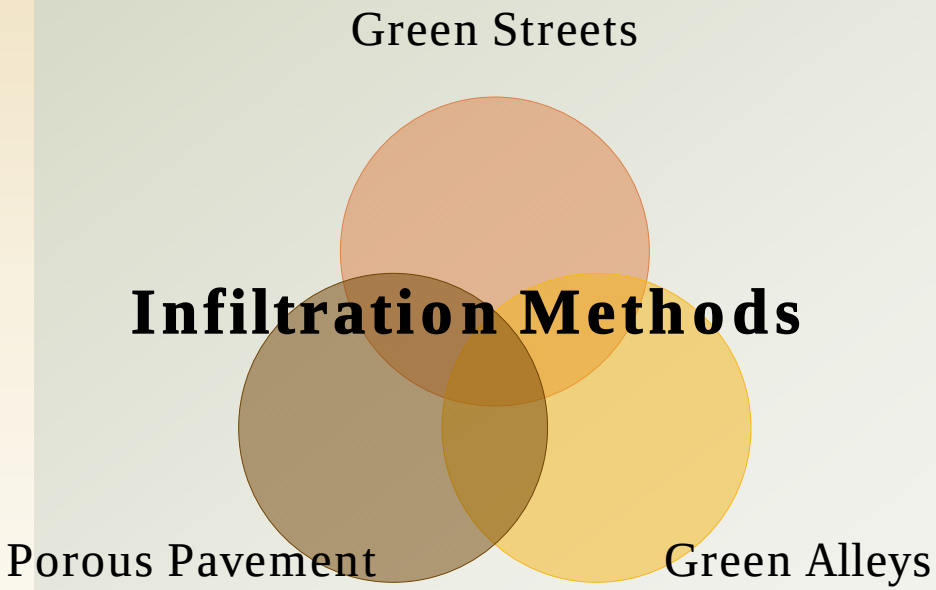

Pilot Project Funding, Design and Installation
Green Streets Report To Council
Maintenance Funding Report
Develop Design Guidelines
Testing & Evaluation
Development of Additional Projects and Policies
December 2008

Completed Actions



- Working Committees
- Project lists
- Selection criteria
- Pilot projects
- Design Guidelines

Today's Action:



- Further investigation
- Develop more pilot projects
- Incorporate into new and pending projects
- Develop standards and guidelines
- More departmental involvement
- Report back

Next Steps

- Council Support
- Proceed with action items
- Coordination of pending and future green infrastructure (LID) action items through Green Team
- Additional LID policies to be adopted by Council in near future