

# Depave

Evaluating Future Sites and Portland Public Schools in Need



Matt Curry  
Carly Vendegna  
Kristen Siesser

## The Problem

- Impermeable Surfaces
- Inequity: lack of access to greenspace
- High stormwater costs



## “From Parking Lots to Paradise”

- Depave's Mission
- Depave and Portland Public Schools
  - More than \$771,000 in stormwater fees from Oct 2010- Sept 2011 (Jeff Hamman, Energy Specialist)
- Goal: Identify priority schools based on Depave's mission and schools with drainage issues and high fees.



## Need Index: Data and Methodology

- Demographic Data: 2010 Census, ACS 5 Year Survey 2006-2010.
- Census Tracts and Park data from RLIS (2010 data)

FOUR FACTORS (number of individuals/census tracts)

- Minority
- Children (0-17 years old)
- Poverty
- Park Access (In-access)
- To create target areas, Z-Scores were calculated for each census tract.

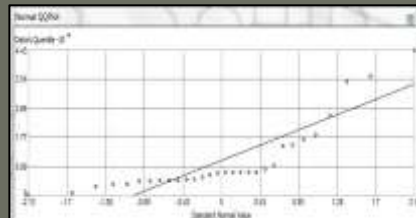
$$Z = \frac{x - \mu}{\sigma}$$

$\mu$  — Mean  
 $\sigma$  — Standard Deviation

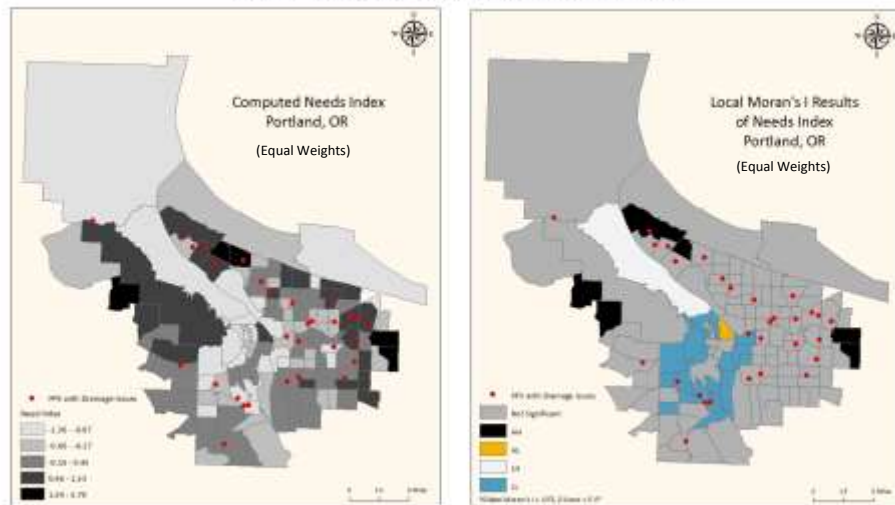
- Need Index calculated using equal and unequal weighting schemes  
 $NI_1 = (NW\_Z * .25) + (A0\_17\_Z * .25) + (POV\_Z * .25) + (PK\_NACSS\_Z * .25)$   
 $NI_2 = (NW\_Z * .40) + (A0\_17\_Z * .20) + (POV\_Z * .20) + (PK\_NACSS\_Z * .20)$

## PPS Data and Methodology

- School Location Data: RLIS 2010
- Drainage Data: PPS Education Adequacy and Facility Assessment 2007-08 Deficiency List, PPS Website
- Stormwater Fees: Jeff Hamman EMIT, Energy Specialist: Buildings Operation and Energy Program Manager
- Stormwater Fees and Drainage Issues (Y/N) was added to RLIS PPS Point shapefile
- Selected 28 schools with Y and 2 schools with next highest SW fees (n=30)



## Need Index Analysis and Drainage Issue Schools



1. Madison
2. Jefferson
3. Roosevelt
4. Peninsula
5. Jason Lee
6. Bridger
7. Vestal
8. East-West  
Sylvan
9. Sitton
10. Astor
11. Rigler
12. Roseway
13. daVinci
14. Sabin



## Community Analyst



- A different approach
- $\frac{1}{4}$ ,  $\frac{1}{2}$  & 1 Mile Buffers around top 14 schools
- 2011 Estimated Percentages of...
  - Household annual income under \$15,000
  - Population ages 0-19
  - Population Minority



## Comparing Results

### • Storm Water Analysis • Community Analyst

- Madison
  - Jefferson
  - Roosevelt
  - Peninsula
  - Jason Lee
  - Bridger
  - Vestal
  - East-West Sylvan
- Jefferson
  - Sitton
  - Roosevelt
  - Rigler
  - Peninsula
  - Jason Lee
  - Vestal
  - Madison
  - Astor

### The Finalists

- Jason Lee
- Madison
- Peninsula
- Roosevelt
- Vestal



## Discussion

- Evaluate drainage issue data on site (2007)
  - Vestal ES Project 2009 example
- Weighting scheme hierarchy needed
- Other variables (funding, soil, etc)
- Spatial Decision Support

• Questions?

