Green Infrastructure On Brownfields

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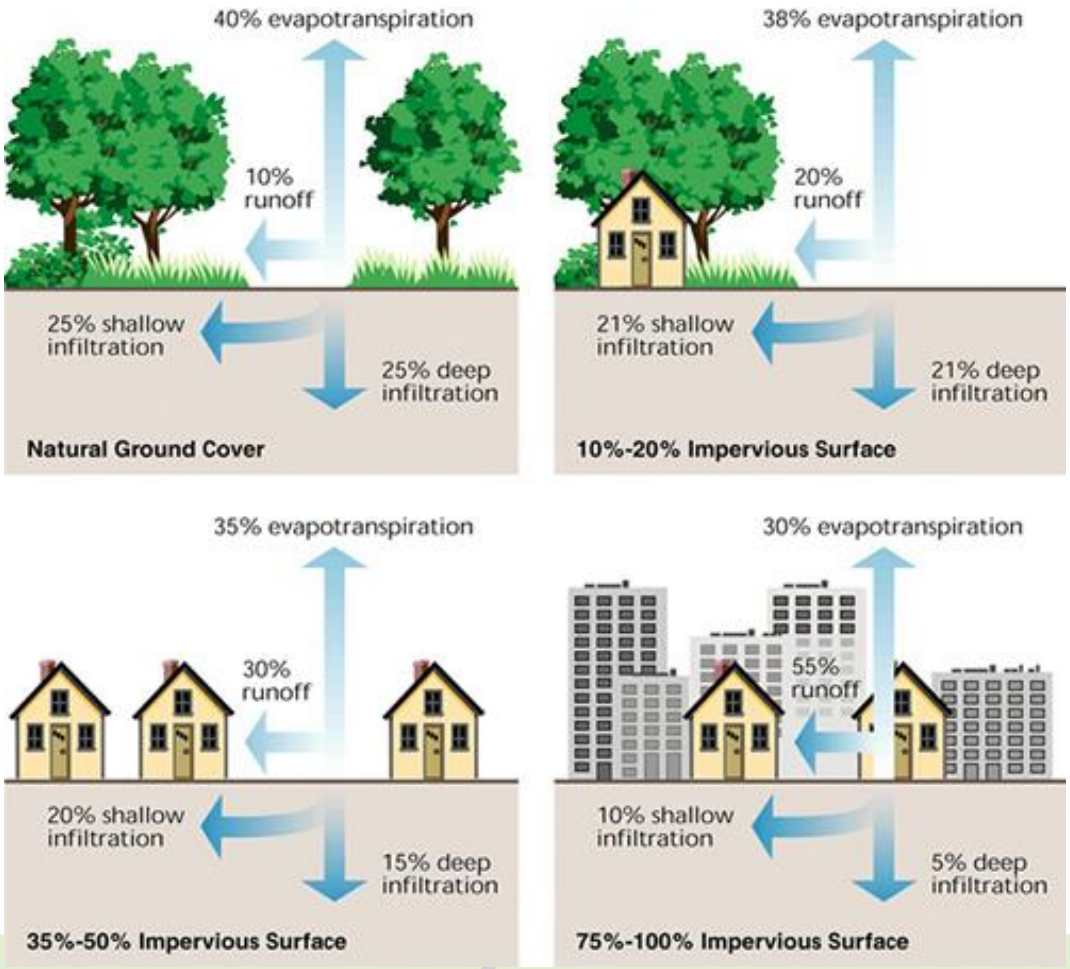
So, what's the problem?



http://www.learnnc.org/lp/editions/mudcreek/6394

Which can lead to…

Photo courtesy of Camden SMART

But I’m redeveloping and managing my runoff…

Traditional stormwater management:
Studies show centralization leads to stream degradation (Booth, 2005; Burns et al., 2012; Coffman, 2000; Hood et al., 2007; Maxted and Shaver, 1998; Walsh et al., 2005)

- better for larger storms
- groundwater mounding
- not good for resiliency

What's the big deal with GI?

- Environmental
  - water
  - air
- Economic
  - energy efficiency
  - property values
- Social
  - aesthetics
  - educational

Photo courtesy of the NJ Tree Foundation

...and how does it help with resiliency?

Photo courtesy of Camden SMART

- intended for small, frequent storm events
- dispersed through landscape
- manages localized flooding
- keeps flow out of overburdened sewers

That's nice, but what's in it for me?

- Direct
  - Reduced flooding (Braden and Johnston, 2004)
  - Reduced pollutant treatment (Braden and Johnston, 2006)
  - Decreased water supply costs (Braden and Johnston, 2006)

- Indirect
  - Increased property values (Braden and Johnston, 2004; Johnston et al., 2006; Mohammed, 2006; Roseen et al., 2012)
  - Less infrastructure (Clar, 2004; Jaffe, 2010; ECONorthwest, 2007)

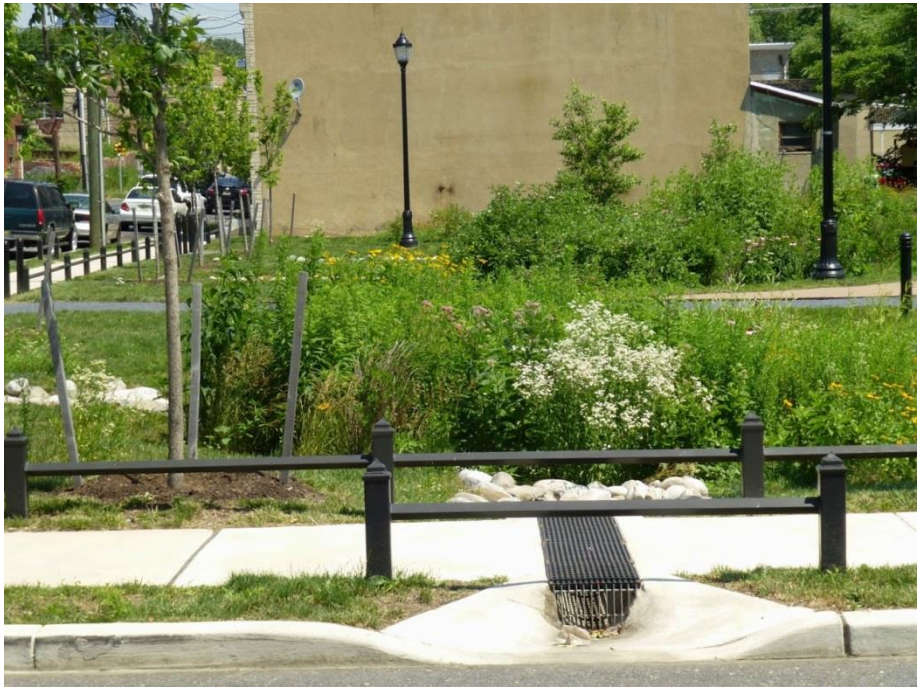
What about maintenance?

- Houle et al., 2013
  - Bioretention and vegetated swales required less staff hours than traditional facilities
  - Porous pavement had the lowest overall maintenance burden
    - Lowest personnel hours
    - 2nd lowest annual cost
  - Maintenance costs could be reduced by decreasing area treated (close to the source)

- Roseen et al., 2012
  - Cost reductions for municipalities: 21-44%, with shifting monies from infrastructure to green jobs

So, let's build projects that look like this…

before



after

Curious? Interested? Call me, let's talk

Photo Courtesy of Camden SMART

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