

Conservation Districts,  
Stormwater,  
and  
Low Impact Development

# Stormwater – The Wave of the Future

- n EPA's Stormwater Phase II impacts all but the largest municipalities. Under Phase II
- n So what to smaller cities and towns have to do?
- n Click here: <http://www.epa.gov/npdes/pubs/fact2-0.pdf>
  - n Reduce the discharge of pollutants to the "maximum extent practicable"
  - n Protect water quality
  - n Satisfy the appropriate sections of the Clean Water Act

# Effects of Stormwater on Water Quantity

- n Flooding and property damage.
- n Damage to stream channels during wet months and lower stream flows during dry months
- n Less groundwater recharge.



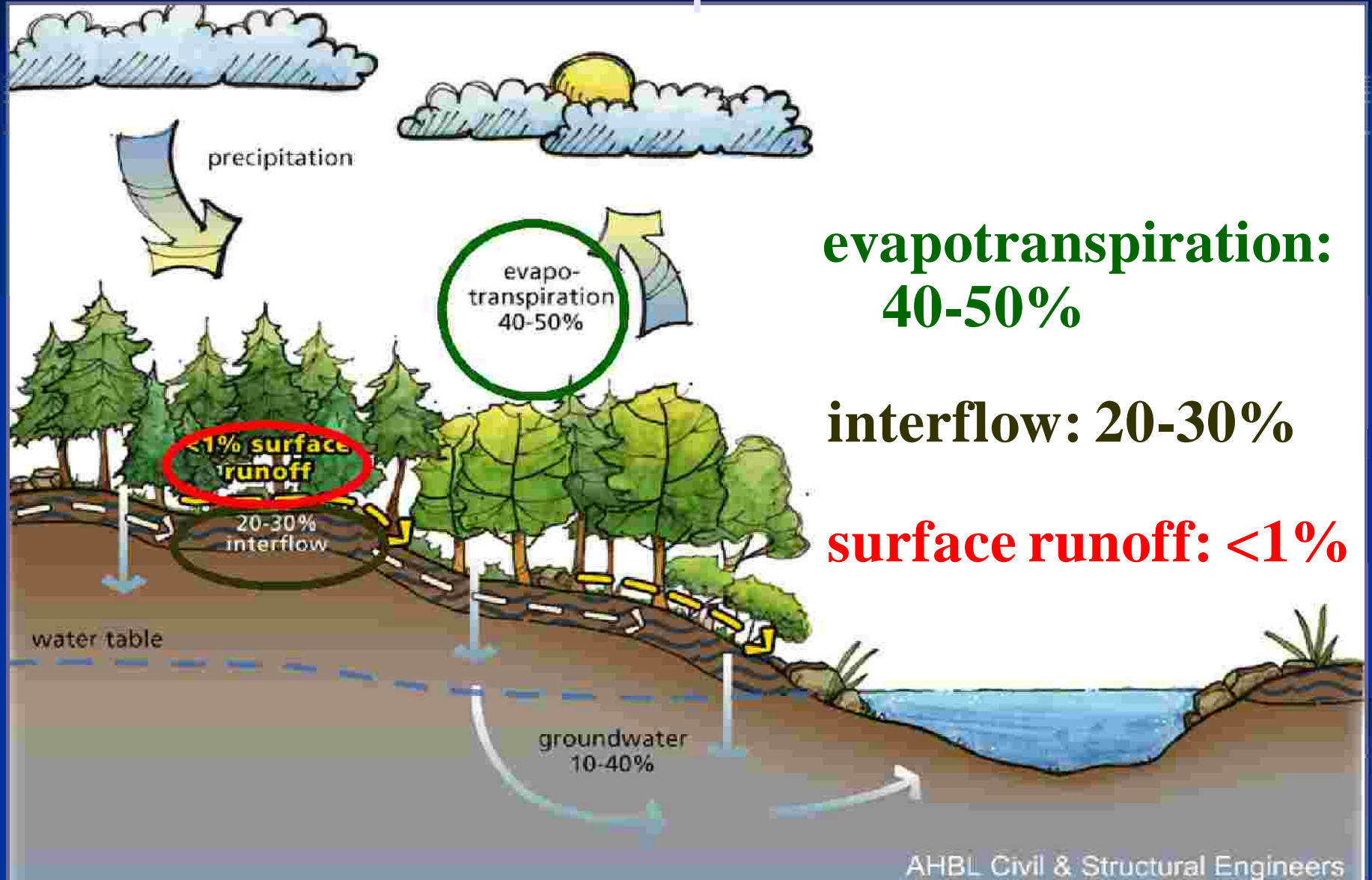
*Photo courtesy Hans Hunger,  
Pierce County Water Programs*

# Effects of Stormwater on Water Quality

- n Restrictions on shellfish harvest
- n Harm to fish and other aquatic life.
- n Polluted sediments



# Watershed Hydrology BEFORE Development

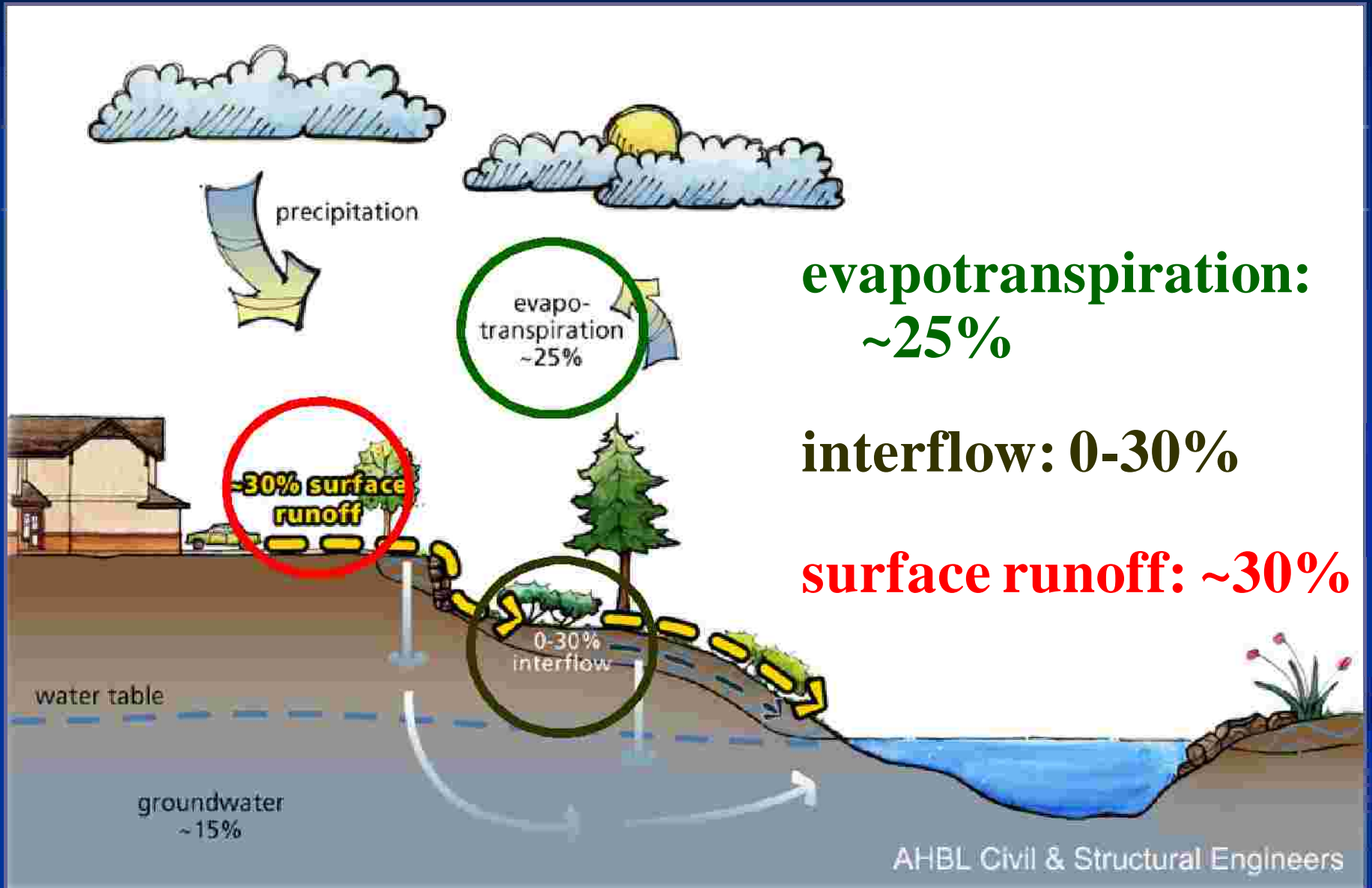


**evapotranspiration:  
40-50%**

**interflow: 20-30%**

**surface runoff: <1%**

# Watershed Hydrology AFTER Development



# Opportunities for Districts

- n Phase II Communities must address these 6 elements:
  1. Public Education and Outreach
  2. Public Participation/Involvement
  3. Illicit Discharge Detection and Elimination
  4. Construction Site Runoff Control
  5. Post Construction Runoff Control
  6. Pollution Prevention/Good Housekeeping
- n Districts can be the lead agency on ALL these!

Lets Focus on One  
Importang Suite of Tools



# Low Impact Development

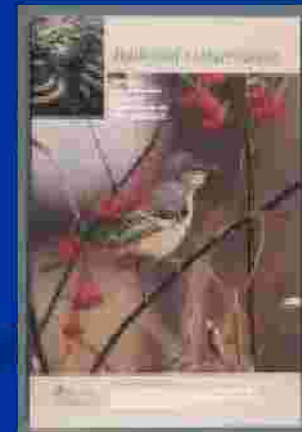
- n Mimics site natural hydrology.
- n Uses suite of site design elements and practices.
- n Protects and uses site's natural features.
- n Uses many small-scale stormwater controls.
- n Manages stormwater close to the source.
- n Applies to urban, suburban & rural sites.

# Benefits of LID

- n Can better protect water resources.
- n Can reduce infrastructure costs.
- n Creates more attractive, livable communities.
- n Can enhance property values.
- n Helps meet stormwater requirements.
- n FREE, incentive based service provided by conservation districts.

# Limitations of LID

- n Not a substitute for stormwater standards
- n Does not replace effective land use planning.
- n Some areas may not be suitable for LID. These areas require other protective implementation elements of the **Backyard Conservation Program** developed by NRCS and delivered through the conservation districts.



# Integrated Management Practices

- n **Bioretention**
- n Amended soils
- n Permeable pavement
- n Vegetated roofs
- n Rainwater harvesting
- n Minimal excavation foundations



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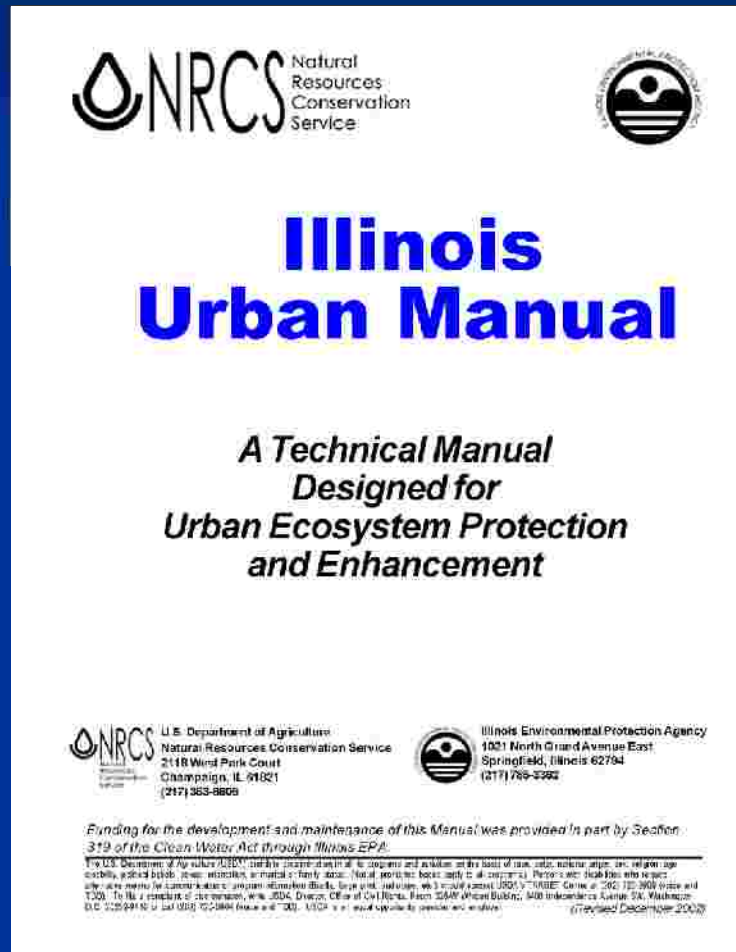


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# In order to truly be of service...



- n Districts need a central point for comprehensive information on technical standards as well as on how to be trained-up to deliver them.
- n We are working with NACD, NCDEA, and NRCS to provide that coordination
- n CPESC and CPSWQ certifications, etc,...

# Examples of Low Impact Development Programs



- n Dakota County (MN) Soil & Water Conservation District
- n <http://www.dakotacountyswcd.org/liddemo.htm>
- n One of the best in the Country

# Examples of Low Impact Development Programs


n The



- n Planning Department essentially inactive
- n District stepped-in to provide developers and landowners guidance



# Examples of Low Impact Development Programs

- n  King Conservation District.
- n District engineer worked with City of Seattle created a template for implementing the city's LID effort.
- n Template can be transferred to other jurisdictions

# Examples of Low Impact Development Programs



n

- n Received a small \$20,000 EPA Grant to train a developer and their engineer to implement a low impact development in Port Angeles.
- n Word gets around... Other developers are calling the district asking for their assistance
- n EPA is pretty excited about the potential of districts to implement LID

...and my personal favorite...

n



Whidbey Island Conservation District

- n Rebuilding their program by making their centerpiece program low impact development and backyard conservation.
- n Beginning with partnership with the City of Langley

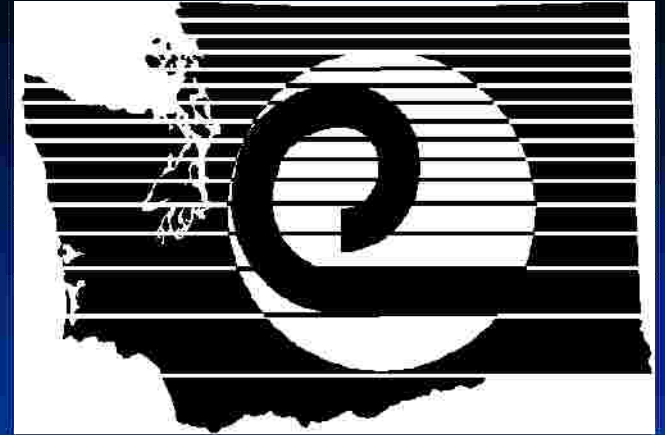
# Home Work...

- n Think about the districts you serve and the programs you manage
- n Which districts have the most challenges with respect to development of working lands?
  - n What are the top two things you would recommend to them to make them a better local partner with their counties and cities?



Questions....?

# Thanks!



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