Westside Watershed Resource Center

A Program of Southwest Neighborhoods, Inc. and the Bureau of Environmental Services

Presented by Erik Horngren, WRC Manager

About Us

The Westside Watershed Resource Center inspires action and awareness on behalf of watershed health in Portland.

- Guidance, referrals and partnership
- Monitor and assess community resources and needs
- Develop programs and projects
- Outreach to increase awareness and action
- Support SWNI Watershed Committee

Our Programs

How can we work together?

- **Native Plant Swap** – Free native plants from your neighbors
- **Tool Shed** – Request to borrow our tools (for FREE!)
- **Stormwater Stars Workshops** – Yard-scale stormwater management
- **Partnership opportunities**
  - Current projects include:
    - Jackson Middle School Community Watershed Improvement Project
    - Restoration work on private lands
    - West Willamette Restoration Partnership

So…what is a watershed?

A watershed is an area of land where all the water that falls there flows into the same waterway.

<u>Tryon Creek Watershed</u>

Tryon Creek →

Willamette River →

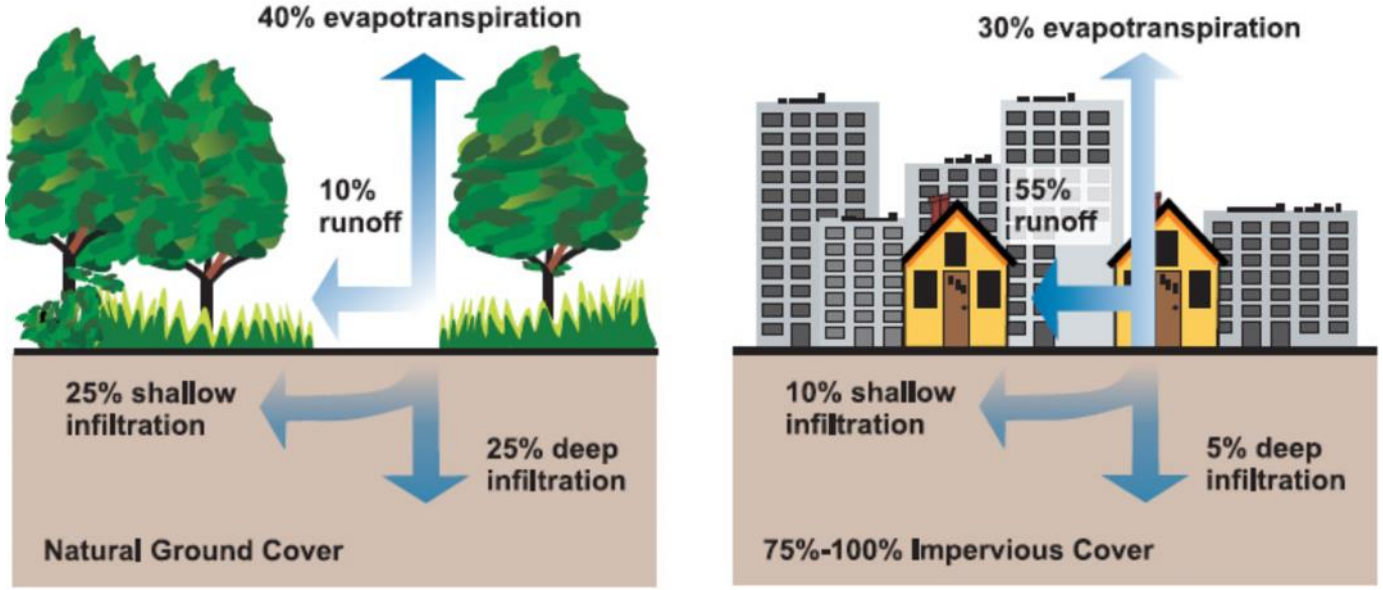
Columbia River →

Pacific Ocean

- Portland watersheds are in urbanized areas with many paved and impervious surfaces
  - Impervious = water can't move through it
  - Roads, parking lots, roofs, driveways

How we got here…

- Urbanization has created more impervious surfaces:
  - Reduces infiltration and roughness → increased flow rates
  - Increases effects from floods and droughts
  - Reduces evapotranspiration
  - **The result? More runoff!!**



Graphic: EPA, 2003

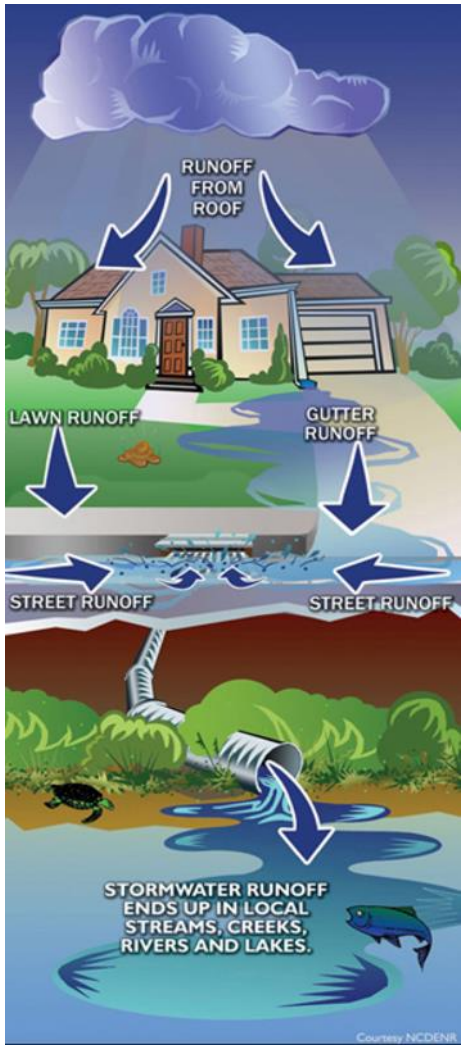
What is stormwater?

Stormwater is water that originates from precipitation.

After the water reaches the ground, it has 3 options:

- **Infiltrate**
  - Get absorbed by plants and/or soil
- **Evaporate**
- **Become runoff (where does stormwater go in SW Portland?)**

Why is stormwater management important?



It prevents harmful pollutants, all of which are common in our urban waterways:

- Bacteria (dog poop)
- Toxic chemicals (pesticides, motor oil)
- Heavy metals (brake dust)
- Phosphorus (fertilizer)
- Thermal pollution (hot asphault, concrete)
- Sediment pollution (erosion, dust, dirt)

Graphic: NCDENR

How can we help our watersheds?

- Limit pollutants from entering stormwater!
  - Eliminate the non-critical use of pesticides, herbicides and fertilizers
  - Use organic products whenever possible
  - Don't dump any chemicals in storm drains
  - Wash cars at commercial car wash
  - Pick up pet waste!
  - Limit erosion at your home
  - Plant native plants or rain gardens to soak up pollutants
  - Remove pavement
  - Address stormwater on your site

STORMWATER STARS

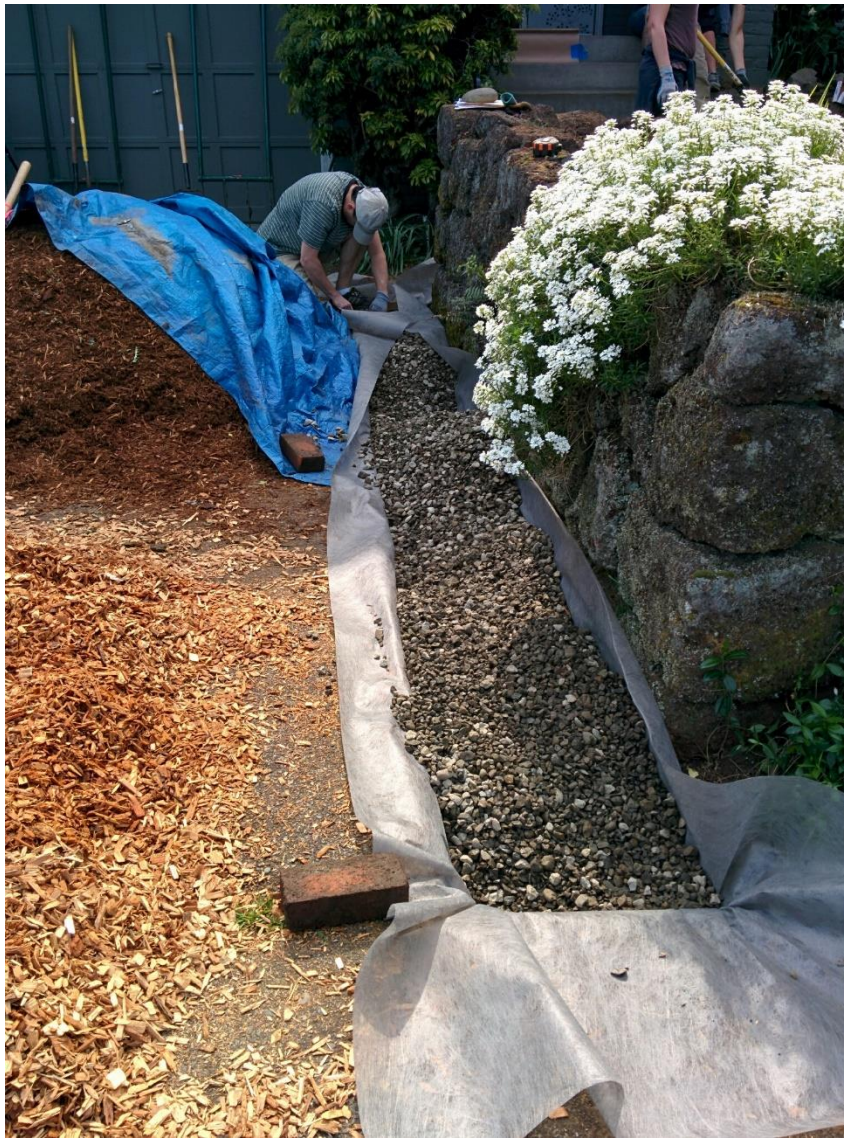
Native Plantings

Plants soak up overland flows, filter pollutants from runoff, recharge groundwater and improve infiltration!

- Willamette Valley native plants (Portland Plant List)
- Plant trees – up to 600 gallons of stormwater per year
- Conventional grass (sod) yards soak up very little water
- Native trees/plants provide habitat for native species: birds, insects, mammals and amphibians
- Choosing Plants
  - "Right plant, right place!"

Porous Walkways and Patios

- Allows people to walk on the pathway and enjoy the yard AND is permeable and absorbs stormwater
- Examples:
  - Woodchips
  - Flagstone
  - Gravel
  - Boardwalks
  - Permeable pavers



Restored Soils

- Urban soils are often compacted and polluted.
- Conventional grass (sod) yards soak up very little water!
- Compacted soils generate runoff volumes similar to that of hardscape surfaces such as sidewalks and roads
- Amending disturbed soils
  - Sod removal
  - Broadfork – fluff up soil
  - Add soil amendments (compost, other soil)
  - Plant eco-lawn mix or native plantings

Contained Planters over Hardscapes

- Planters can reduce annual runoff by 40-60% from the area on which they are placed
- Durability is important – no plastic
- Planters must drain from the bottom
- Use native soil, not store-bought

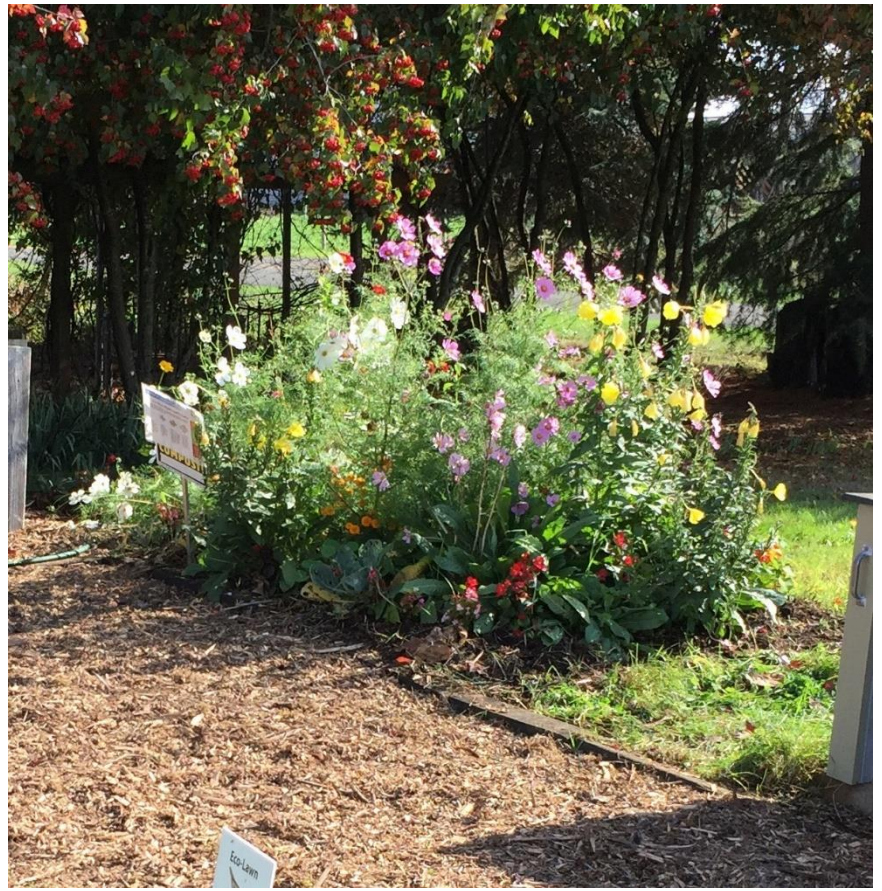
Depaving

- Minimizing impervious cover is a critical part of stormwater management.
- Small, unused pavement areas add up to a lot of unnecessary harm to the watershed
- The solution?
  - Depave!
- Split driveways reduce runoff by about 5000 gallons/year
- Permitting for this activity varies, so please check with your local municipality.

Photo from East Multnomah Soil & Water Conservation District

Lawn and Sod Removal

From this…..



To this!

Let's work together…

The WRC can provide:

- Technical Resources and Advice
  - Grantwriting help
  - On-the-ground project support and ideas
  - Environmental restoration advice
    - **Have a project idea?**
  - Natural landscaping
  - Invasive plant removal
  - Erosion control
- Tool Loan
- Project Support and Partnership
- Outreach and Education

Questions?