

ROOFTOP RETROFITS

Low-impact development (LID) is a process to manage rain water “at the source” using natural vegetation and inexpensive, small-scale practices. LID can be applied to new construction or as a retrofit to existing development.

What is it?

❑ Downspout Disconnect

Simply disconnecting all downspouts that connect to the municipal storm sewer system



❑ Rainwater Catchment

Practice of collecting and using large volumes of rainwater for beneficial purposes



❑ Infiltration Rain Garden

Bowl-shaped garden beds that utilize plants and amended soils to hold and soak in runoff from roofs and driveways



❑ Soakage Trench

A narrow, rock-filled trench with no outlet that receives and stores runoff



How does it help?

- Disconnected downspouts are best combined with a rain garden, cistern or permeable pavement
- Together, they help recharge groundwater and reduce the large volumes of stormwater that contribute to streambank erosion and combined sewer overflows
- During the rainy season, captured water can be slowly released from the cistern (or rain barrel) and allowed to soak into the ground
- Captured rainwater may be utilized for non-potable uses, including supplemental irrigation of garden beds
- May reduce water bills by offsetting the volume of potable water used for non-potable applications (ie irrigation, toilets)
- A rain garden mimics the natural drainage of forests and prairies to collect, absorb and clean stormwater runoff
- The flexibility of size and shape makes rain gardens a perfect fit for developed urban properties
- Use native plants, stones and creative downspout designs to create an attractive landscape feature
- Underlying soils must have infiltration rate greater than 1-inch per hour
- The voids in the gravel layers temporarily hold water and slowly release it into the soil thus helping to recharge groundwater
- Best used in combination with a perforated drain pipe or at the end of a vegetated swale
- Soakage trenches may not be an option in areas with a high water table



Visit www.conservationdistrict.org to learn more about the urban conservation program and additional services offered by the Clackamas County Soil and Water Conservation District.

Erik Carr, Urban and Community Conservationist
 Clackamas County Soil and Water Conservation District
 503-210-6012
ecarr@conservationdistrict.org