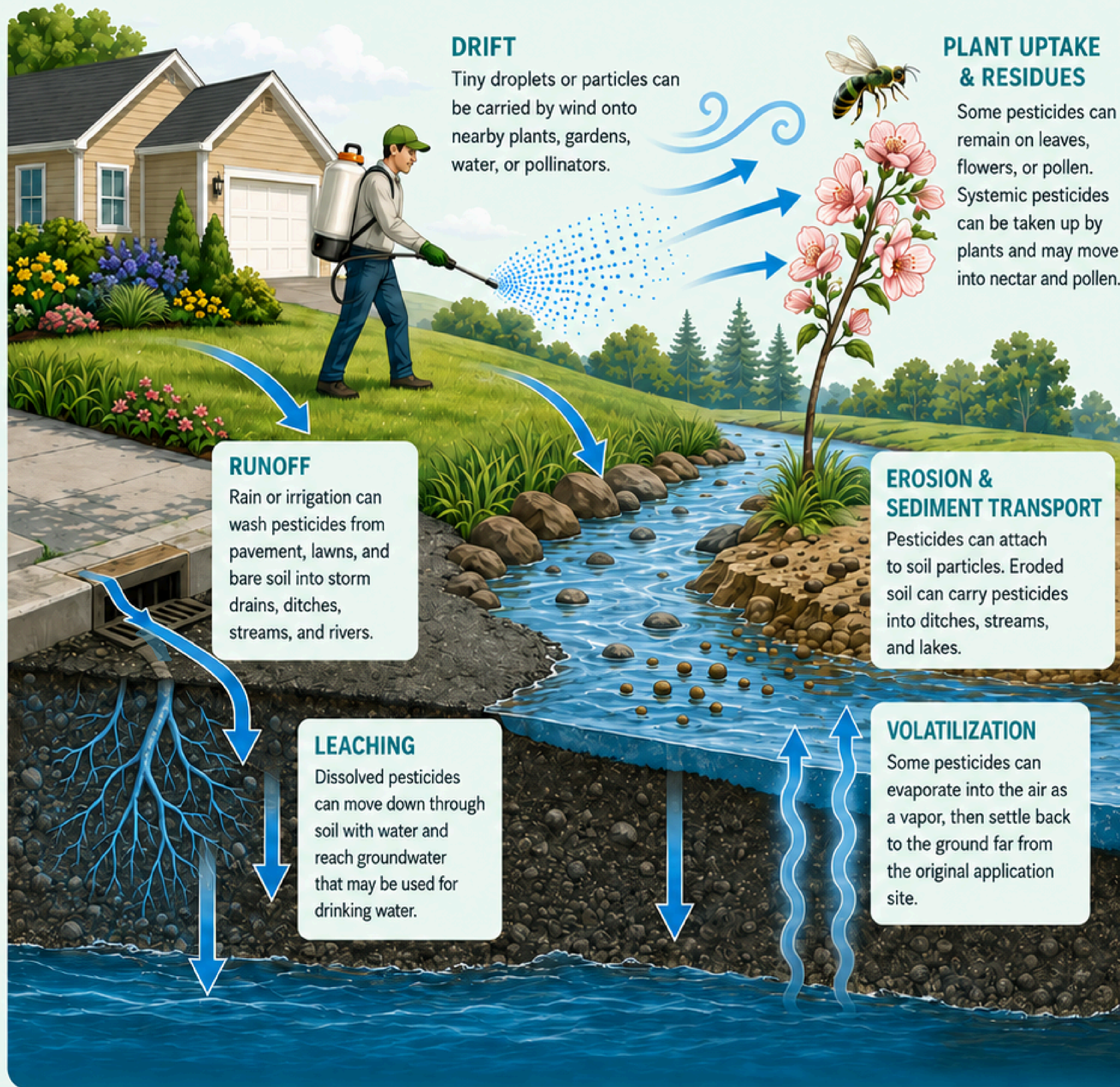


How Pesticides Move Through the Environment

Understanding Pathways & What Affects Movement

Pesticides can move away from where they are applied and end up in places we don't intend—air, soil, water, and the plants and pollinators that depend on a healthy environment.



DRIFT

Tiny droplets or particles can be carried by wind onto nearby plants, gardens, water, or pollinators.

PLANT UPTAKE & RESIDUES

Some pesticides can remain on leaves, flowers, or pollen. Systemic pesticides can be taken up by plants and may move into nectar and pollen.

RUNOFF

Rain or irrigation can wash pesticides from pavement, lawns, and bare soil into storm drains, ditches, streams, and rivers.

EROSION & SEDIMENT TRANSPORT

Pesticides can attach to soil particles. Eroded soil can carry pesticides into ditches, streams, and lakes.

LEACHING

Dissolved pesticides can move down through soil with water and reach groundwater that may be used for drinking water.

VOLATILIZATION

Some pesticides can evaporate into the air as a vapor, then settle back to the ground far from the original application site.

CHEMISTRY MATTERS

Pesticide properties influence how they move and how long they last in the environment.

Property	Plain Meaning	Why it matters
Water solubility	How easily a pesticide dissolves in water.	High solubility = greater potential to move with runoff or leach through soil.
Soil adsorption (soil binding)	How strongly a pesticide sticks to soil and organic matter.	High binding = less leaching, but more risk of moving with eroded soil.
Persistence / half-life	How long a pesticide remains in the environment before breaking down.	Longer persistence = longer exposure risk to people, pets, pollinators, and wildlife.
Volatility	How easily a pesticide turns into a vapor or gas.	High volatility = greater risk of vapor drift and deposition in other areas.

WHAT YOU CAN DO

Avoid spraying on windy days.

Avoid spraying before rain. Do not over-irrigate after application. Follow label directions for watering.

Use only when needed, and follow the label. Spot treat—don't blanket treat.

Avoid spraying blooming plants or blooming weeds when pollinators are active, especially with insecticides.

Keep pesticides off pavement and near storm drains.

Do not dump pesticides down drains, gutters, soil, or storm drains. Check the label and local waste program.

