

Lake-Friendly Best Practices and Incentives for Homeowners in an Impaired Watershed



Lake Whatcom
Homeowner
Incentive Program

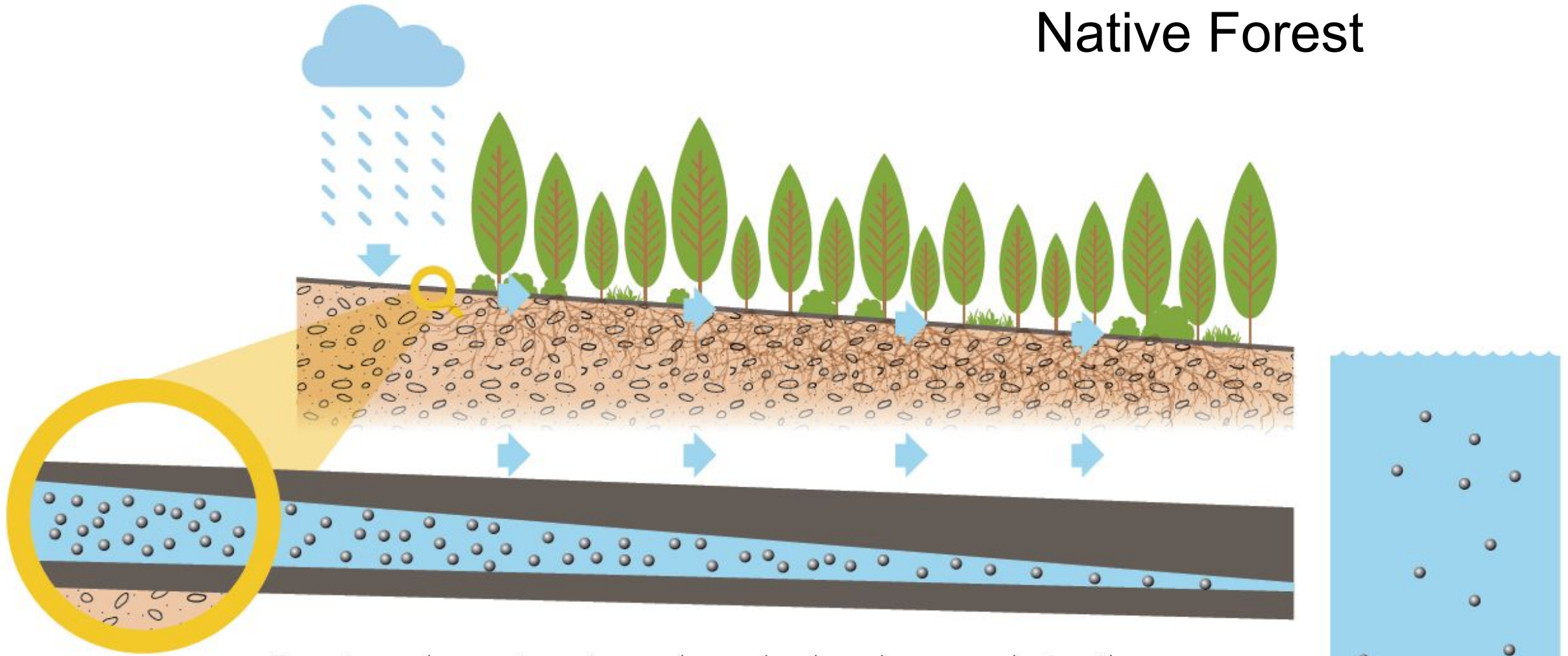


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City of Bellingham
May 28, 2026

Lake Whatcom Watershed

- 50-year cleanup plan
- Requires **87%** phosphorus reduction
- Only **76%** of watershed drains to City storm system
- Best end-of-pipe treatment ~85%, at great expense, still ineffective: $76\% * 85\% = \mathbf{65\%}$
- Can't meet water quality improvements with end-of-pipe treatment alone: $\mathbf{65\% < 87\%}$

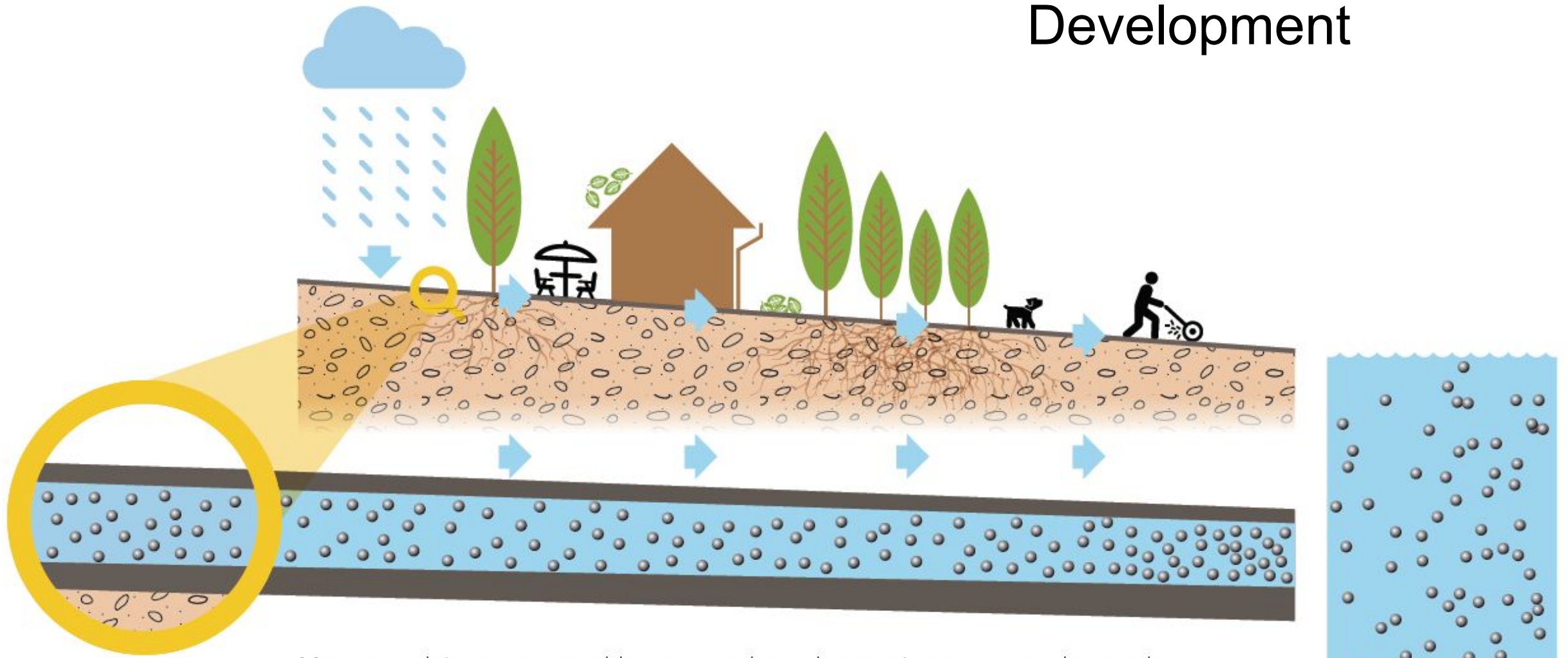
Native Forest



Forests soak up rain water and recycle phosphorus, reducing the amount of water and nutrients flowing through the top layer of soil to Lake Whatcom.

● = *phosphorus*

Development

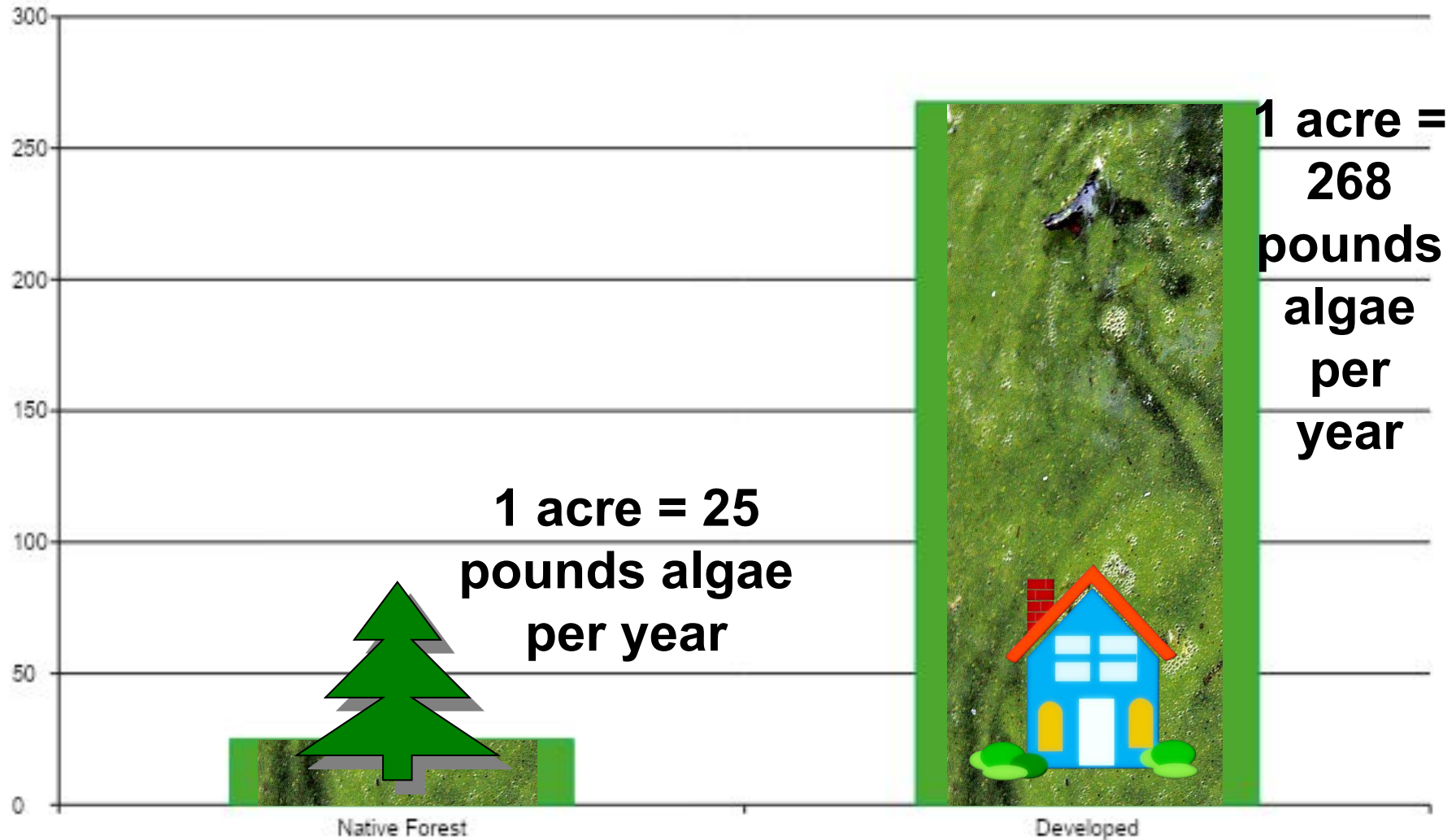


Houses, driveways, and lawns soak up less rain water and recycle phosphorus less efficiently than native plants, which increases the amount of phosphorus in runoff that is funneled into Lake Whatcom.

● = phosphorus

Lake Whatcom

Too Much Phosphorus





Permeable pavement allows water to pass through hard surfaces into the soil below.

Infiltration trenches help slow and clean runoff using soil as a filter.

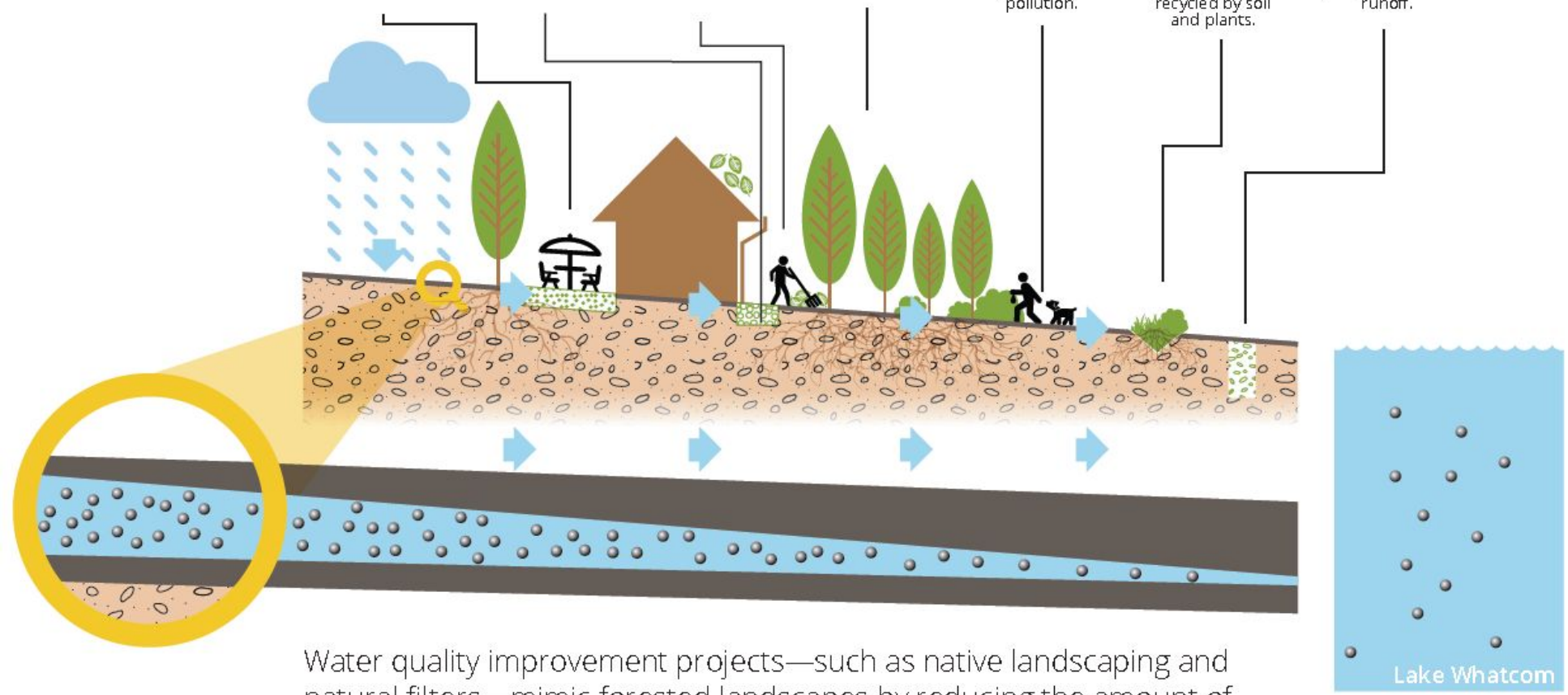
Leaves and clippings are composted off site to prevent the phosphorus they contain from entering Lake Whatcom.

Native landscaping captures and uses phosphorus to build healthy plants and soil.

Scoop your dog's poop, bag it, and place it in the trash to reduce bacteria and phosphorus pollution.

Lake Whatcom Rain Gardens hold and slowly release runoff into the ground where phosphorus is captured and recycled by soil and plants.

Media filter drains allow water to flow through a special mix of materials designed to remove phosphorus from runoff.



Water quality improvement projects—such as native landscaping and natural filters—mimic forested landscapes by reducing the amount of phosphorus and water flowing into the Lake.

● = phosphorus

Methods for Phosphorus Reduction

Native Landscaping

Combines nutrient retention and recycling (up to 85% reduction)



Methods for Phosphorus Reduction

Infiltration

Drainage through native soil soaks in available P (up to 95% reduction)



Methods for Phosphorus Reduction

Treatment

Physical, chemical, and biological processes via media mix (~85%)

A rectangular garden bed with plants, next to a wooden fence. The garden bed is filled with dark soil and several small plants. A black pipe runs through the garden bed. The wooden fence is in the background.

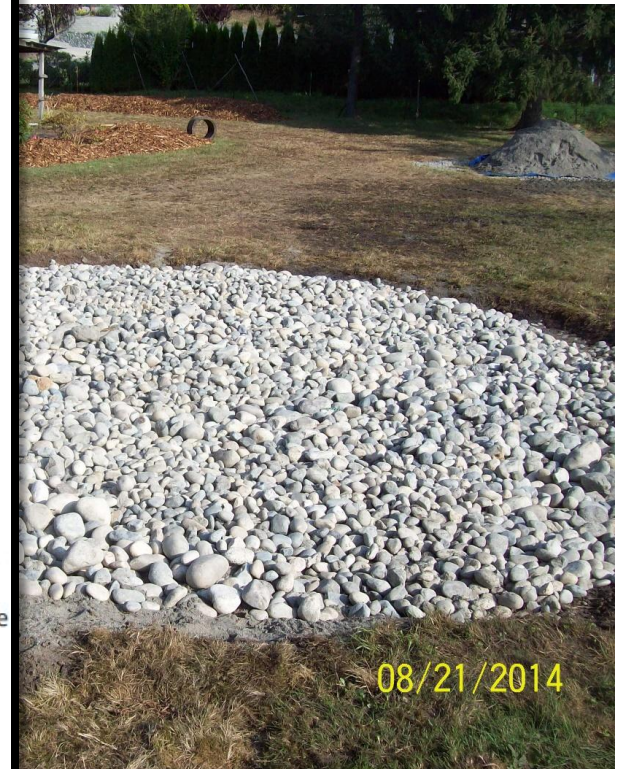
small footprint
This small but mighty filter excels in tiny spaces. Even if you don't have a large yard, you can still help keep Lake Whatcom clean.

A circular inset showing a cross-section of a filter bed with layers of media.

big benefit
POST filters contain materials specifically designed to keep pollutants out of Lake Whatcom.

A circular inset showing a red wooden table and chairs on a patio.

invisible infiltration
Top your underground filter with a native plant garden or cover with a patio or gravel surface for entertaining.



Methods for Phosphorus Reduction

Dispersion

Draining into native forest recycles P into vegetation (~85% reduction)

