

Tucson, Arizona, USA

1904



2007











One inch of rain...

- falling on a 1,000 ft² catchment surface = 600 gallons of water
- falling on 1 acre of catchment surface = 27,000 gallons of water
- falling on Tucson, Arizona (227 square miles) = 3.94 billion gallons of water

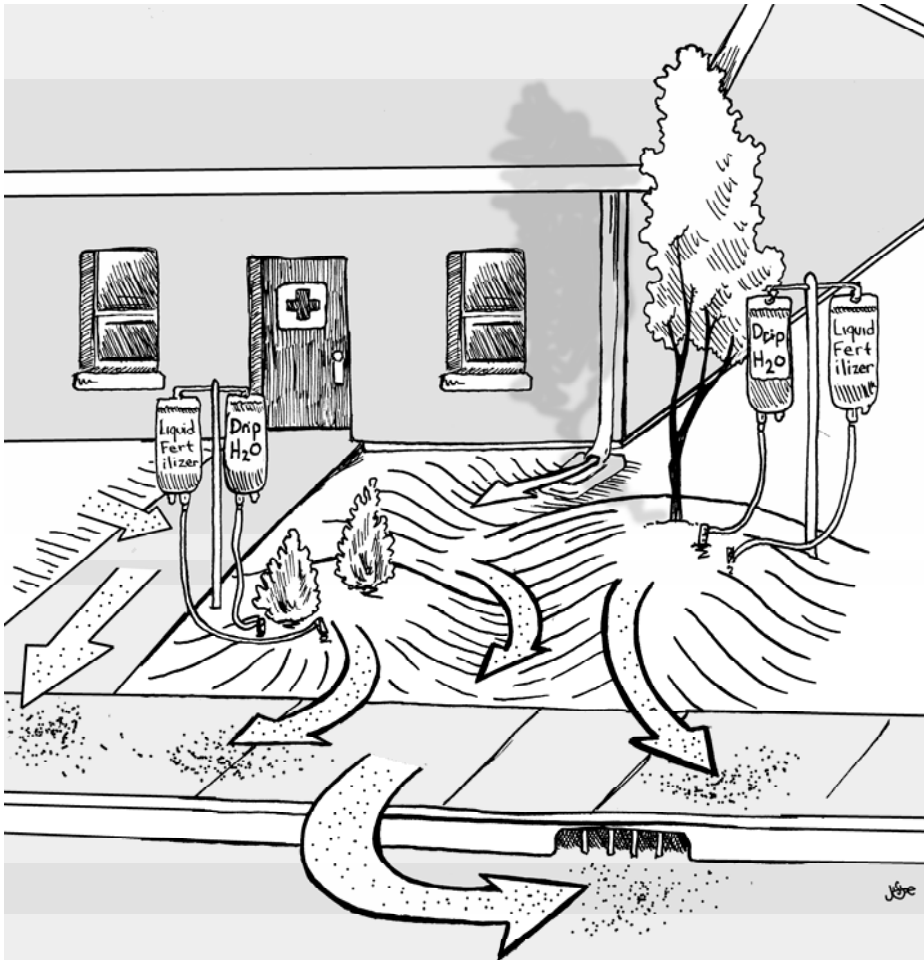
Ten millimeters of rain...

- falling on 100 m² of catchment surface = 1,000 liters of water
- falling on 1 hectare of catchment surface = 100,000 liters of water
- falling on Tucson, Arizona (587.9 km²) = 14.9 billion liters of water





Path to scarcity in the landscape:
30 to 50% of the potable drinking water consumed by the average single family household in the western U.S. is used for landscape irrigation



Path to abundance in the landscape:

- Rainwater is primary water source
- Greywater is secondary water source
- Municipal/well water only a supplementary source



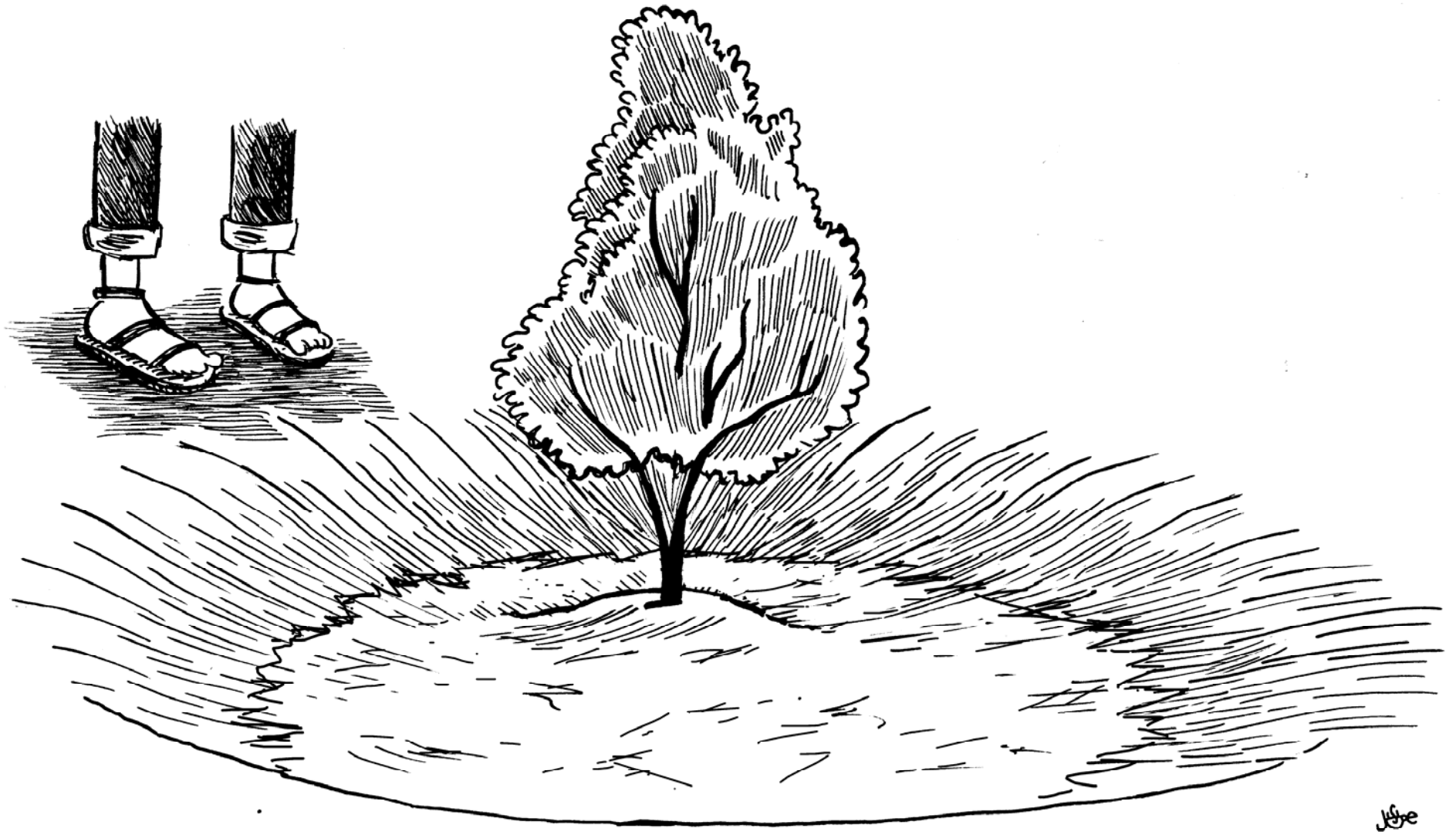
1. Long and thoughtful observation



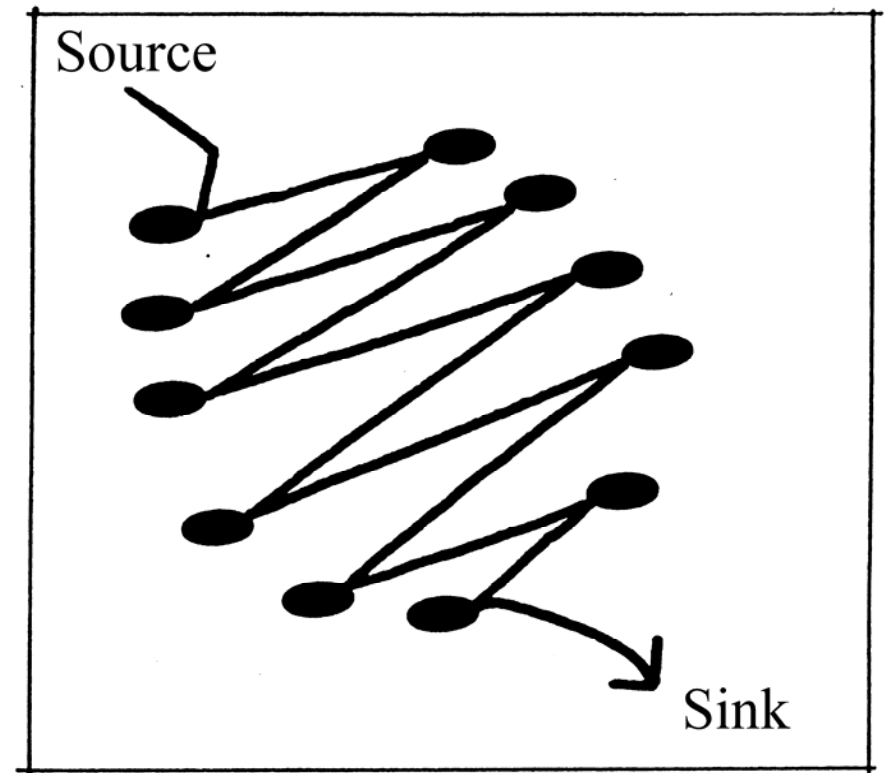
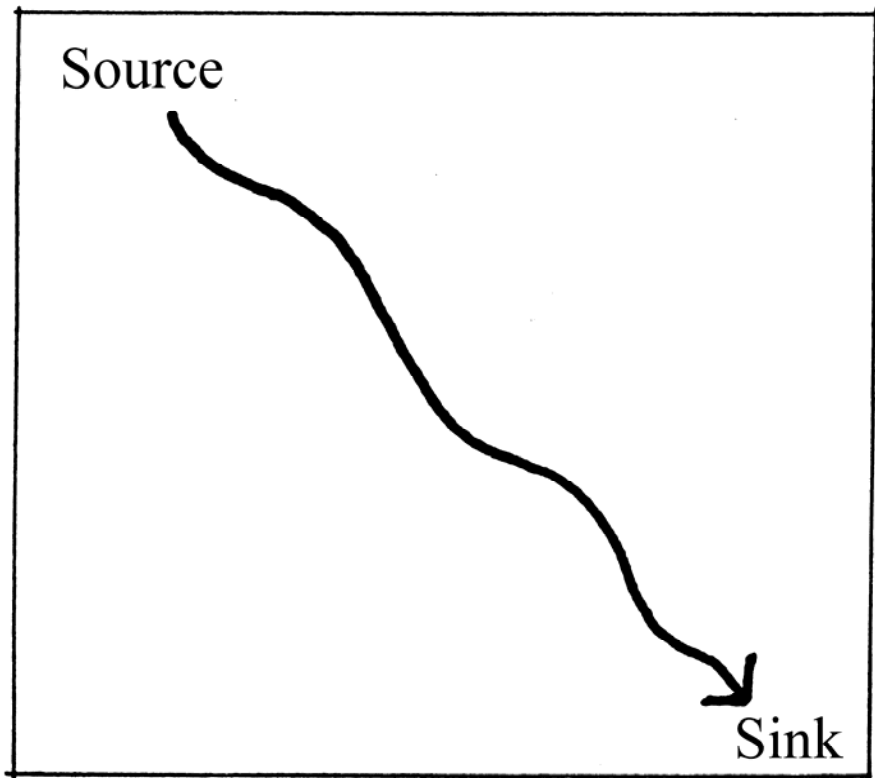
2. Start at the top of the watershed and work your way down



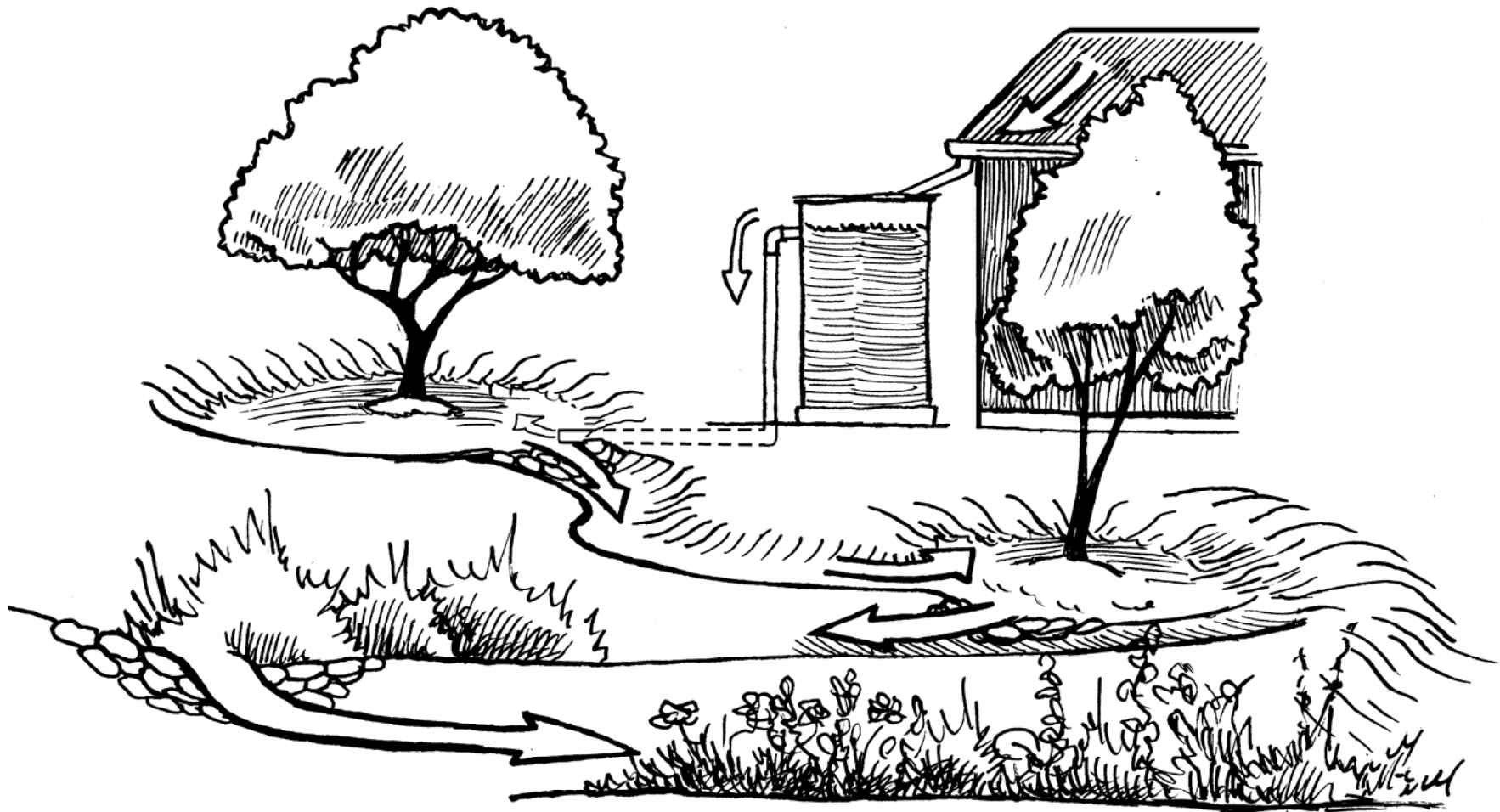
3. Start small and simple



4. Slow spread and infiltrate



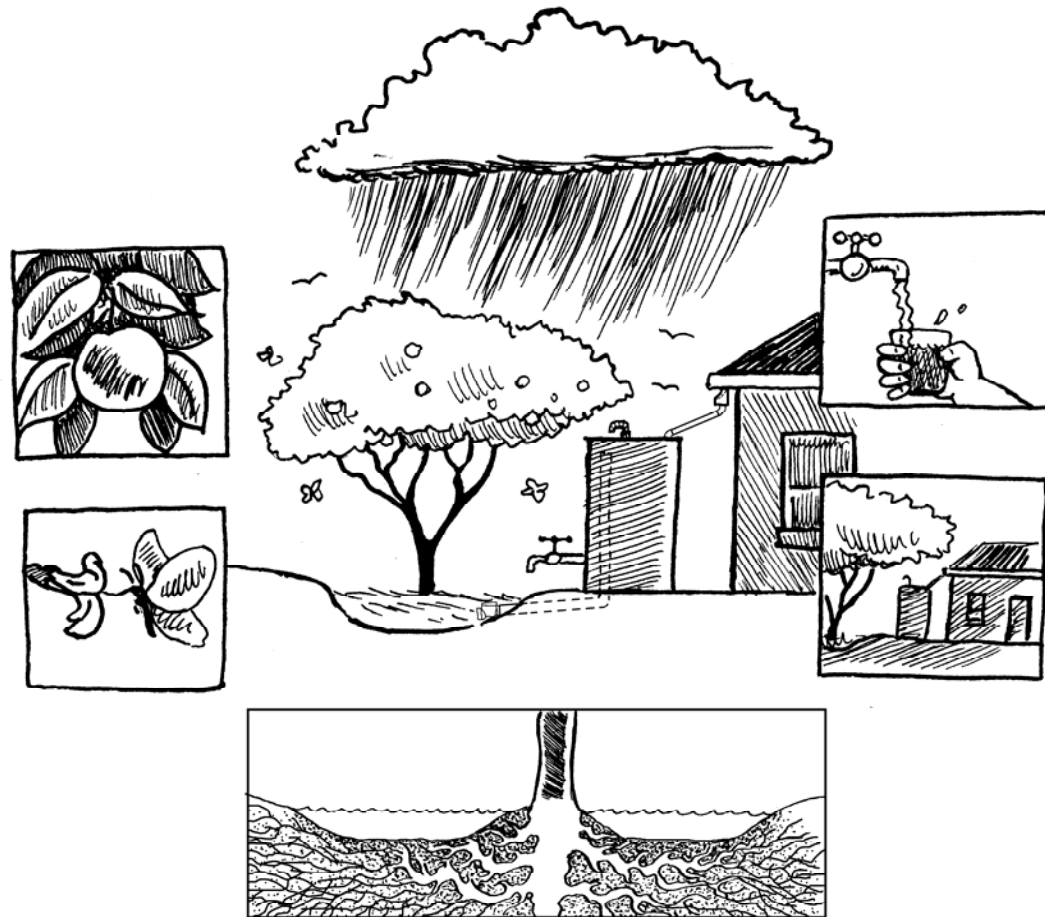
5. Always have an overflow and use it as a resource



6. Maximize living and organic groundcover



7. Maximize beneficial relationships and efficiency by “stacking functions”

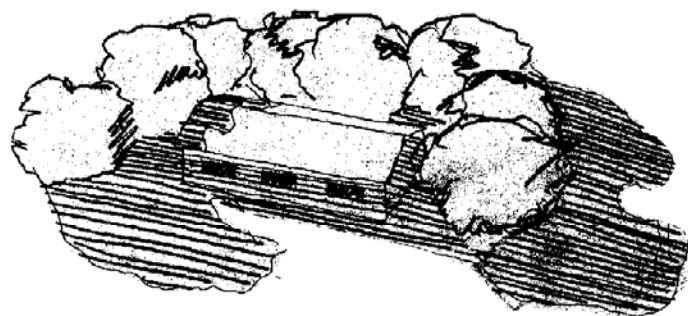


8. The feedback loop: long and thoughtful observation

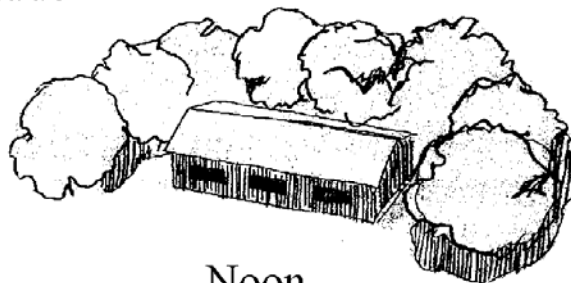


Summer Solstice
32° N Latitude

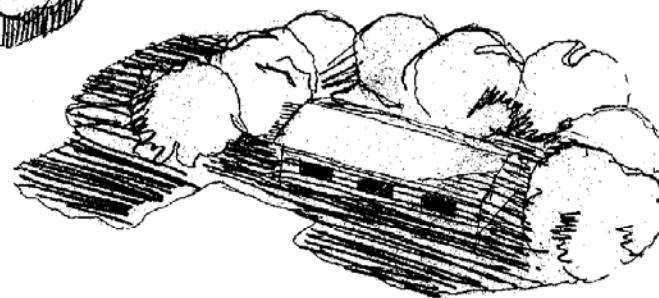
Late Afternoon



Noon



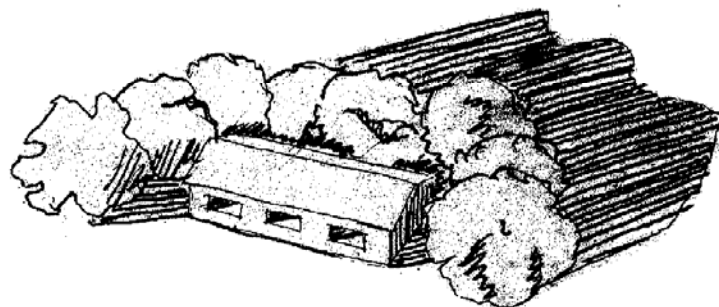
Early Morning



WEST

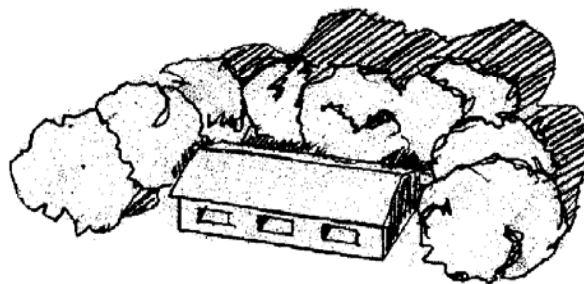
EAST

Late Afternoon

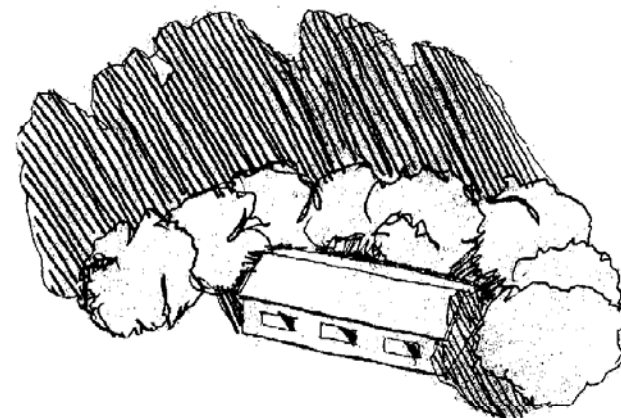


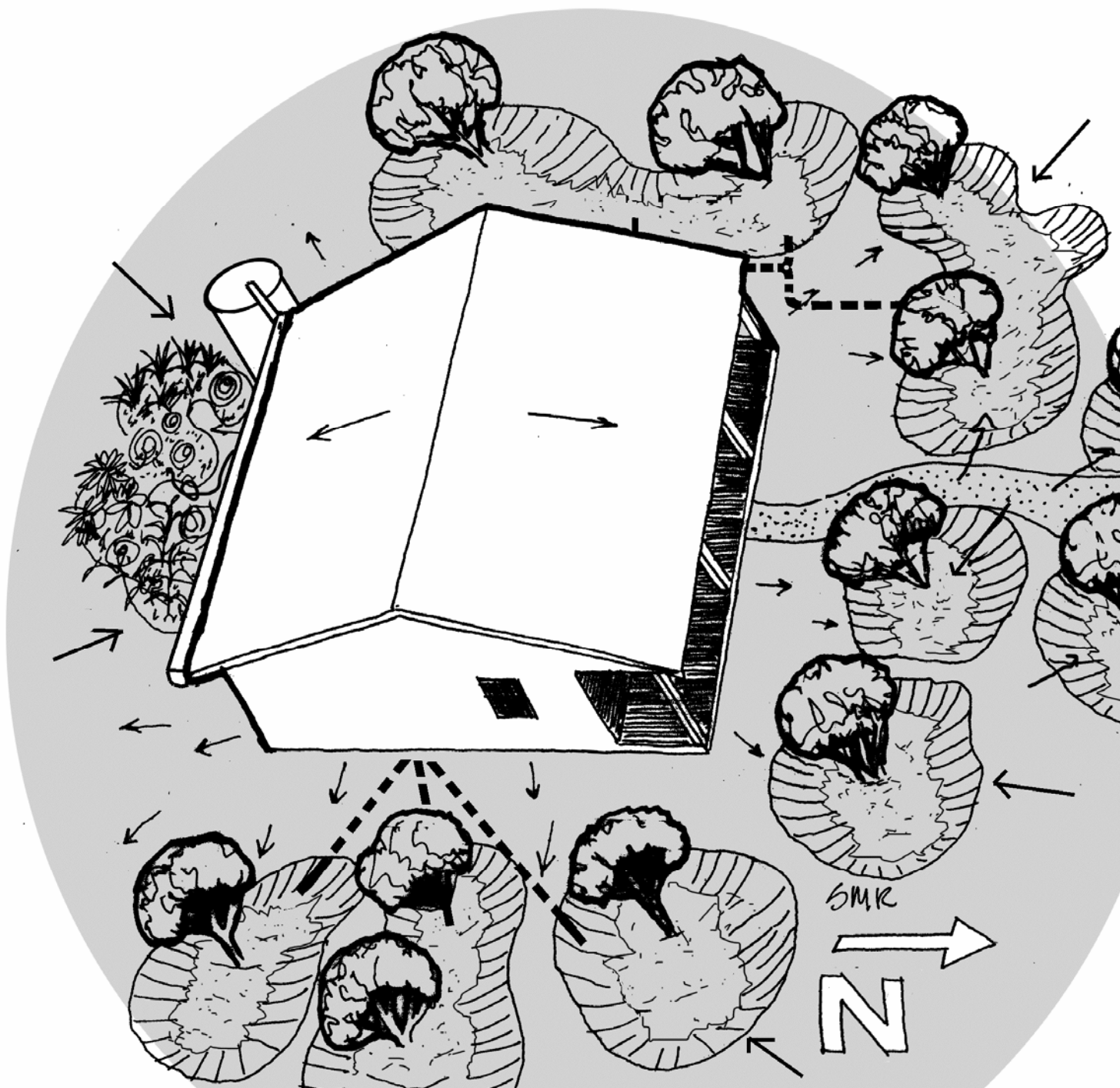
Winter Solstice
32° N Latitude

Noon

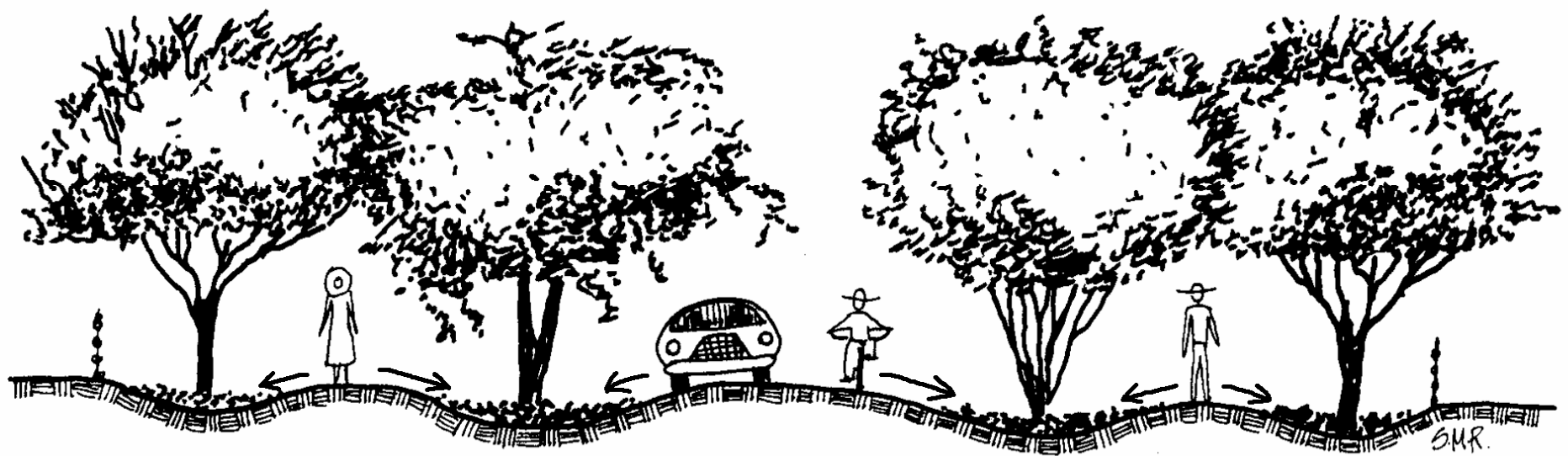


Early Morning



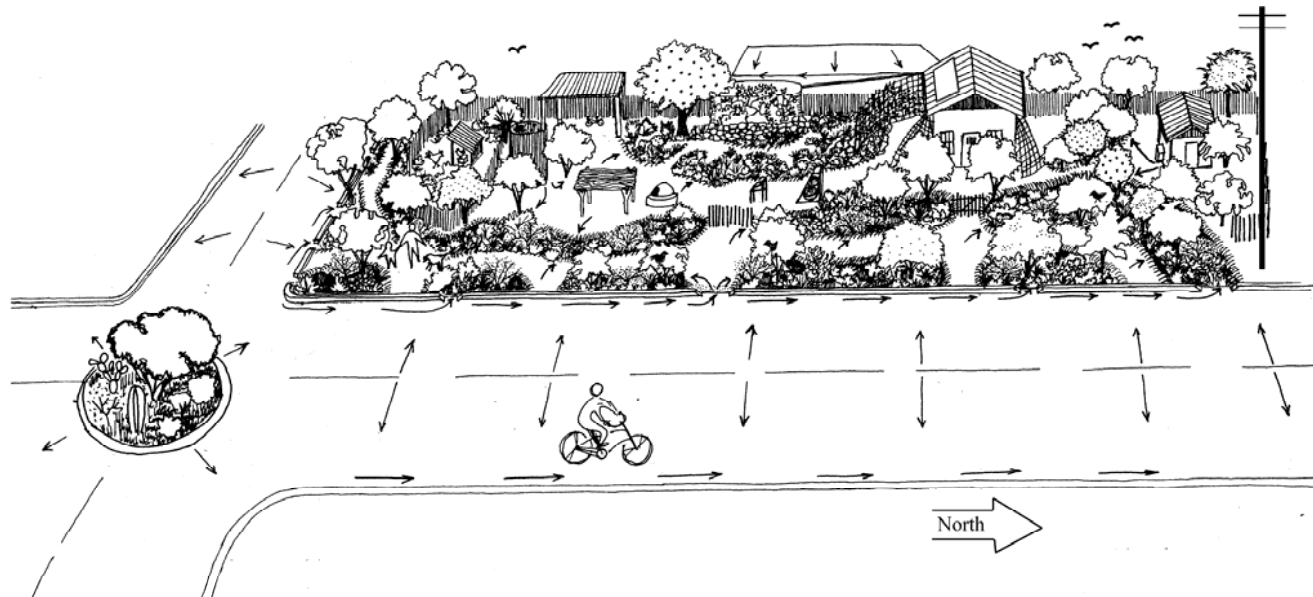
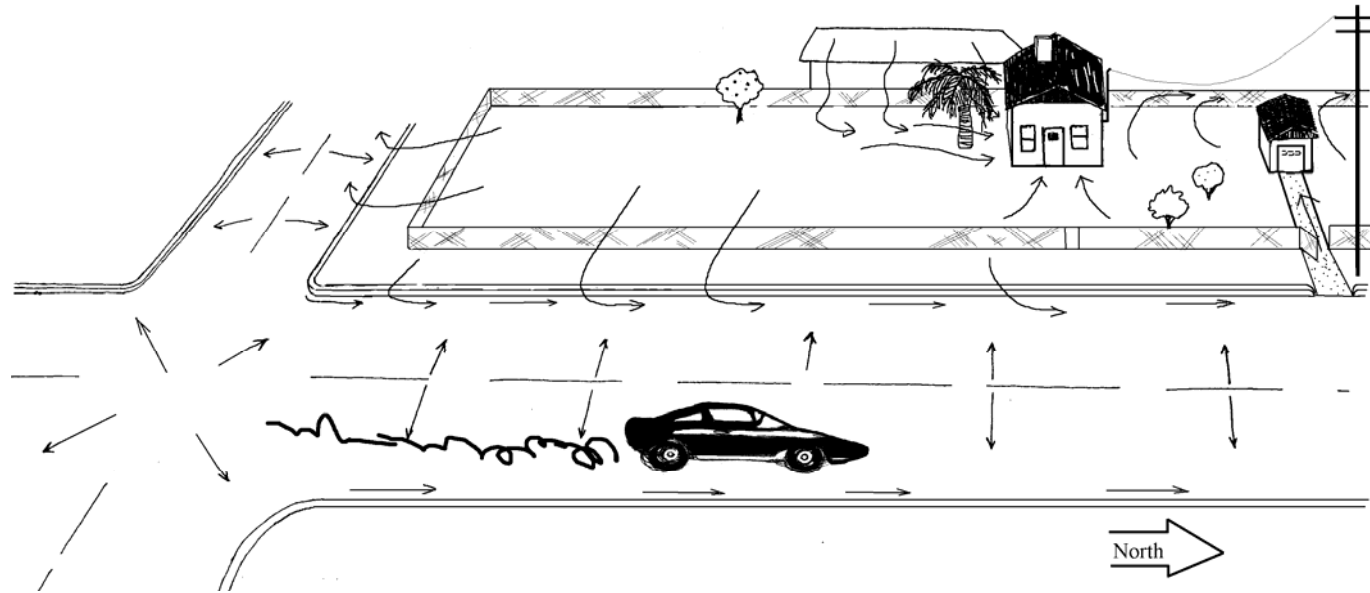






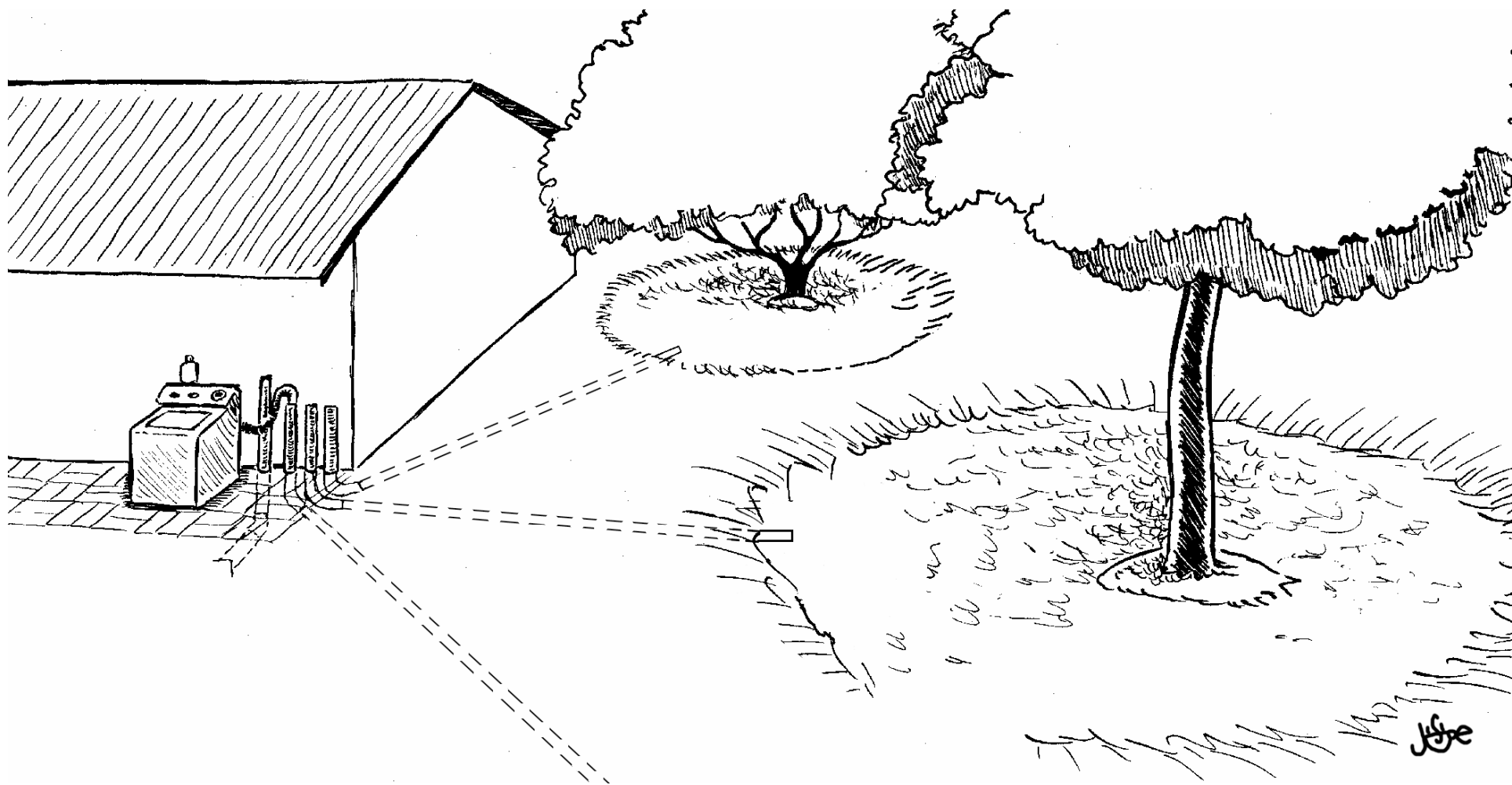




















For every inch of rainfall...

- A 10-foot wide paved street will drain 27,800 gallons of runoff per mile
- A 20-foot wide paved street will drain 55,700 gallons of runoff per mile
- A 30-foot wide paved street will drain 83,500 gallons of runoff per mile

For every 100 mm of rainfall...

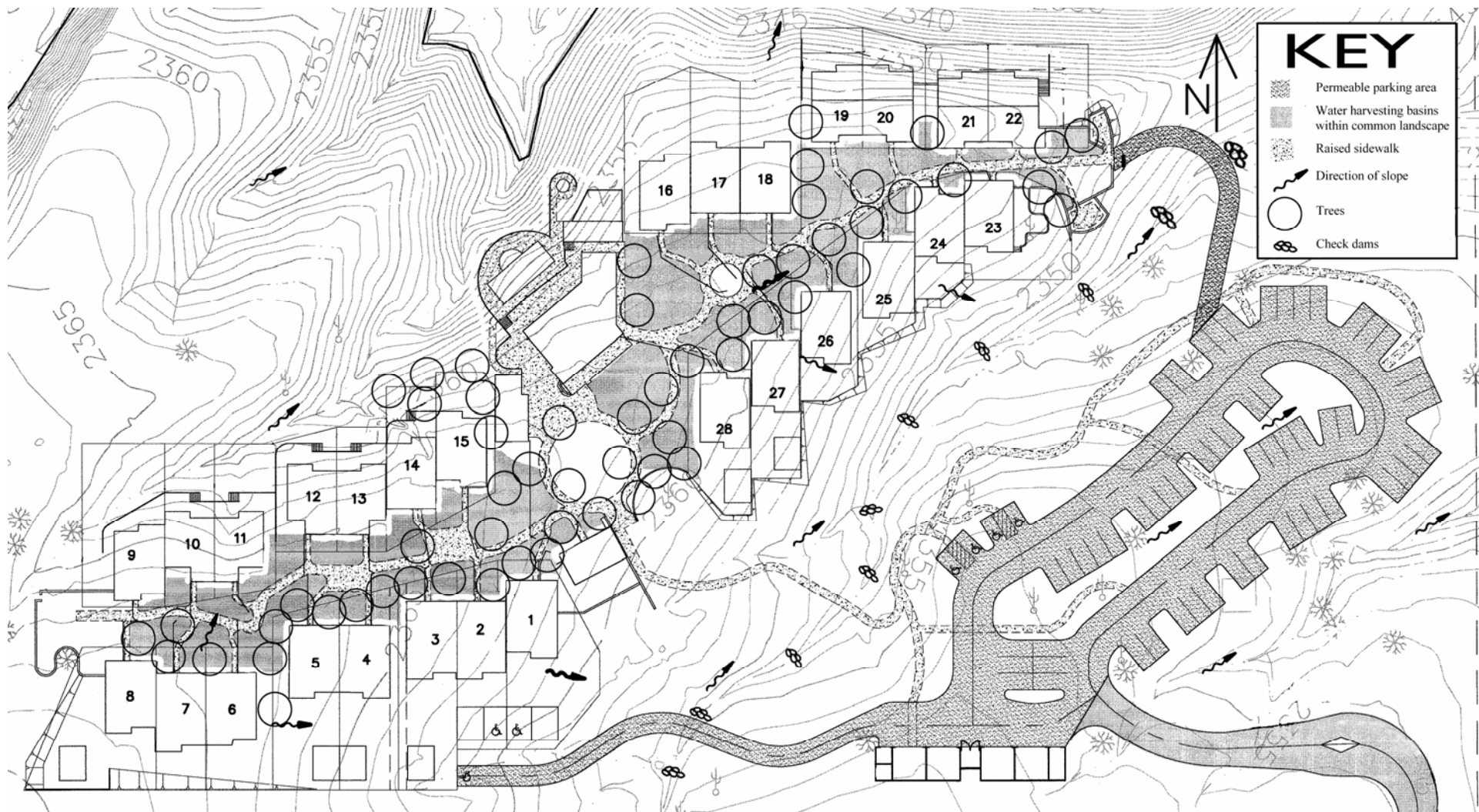
- A 3-m wide paved street will drain 300,000 liters of runoff per kilometer
- A 6-m wide paved street will drain 600,000 liters of runoff per kilometer
- A 9-m wide paved street will drain 900,000 liters of runoff per kilometer





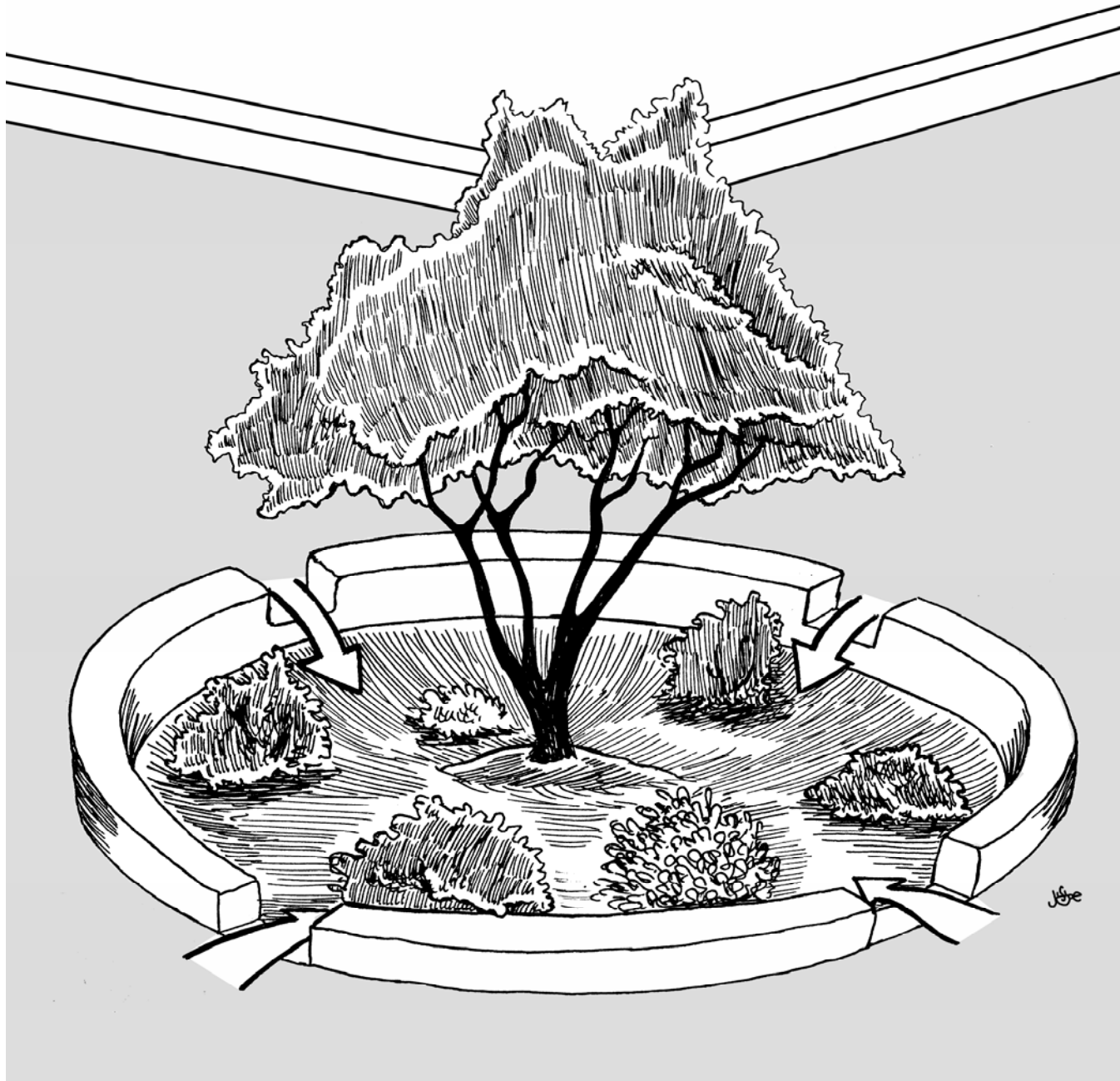








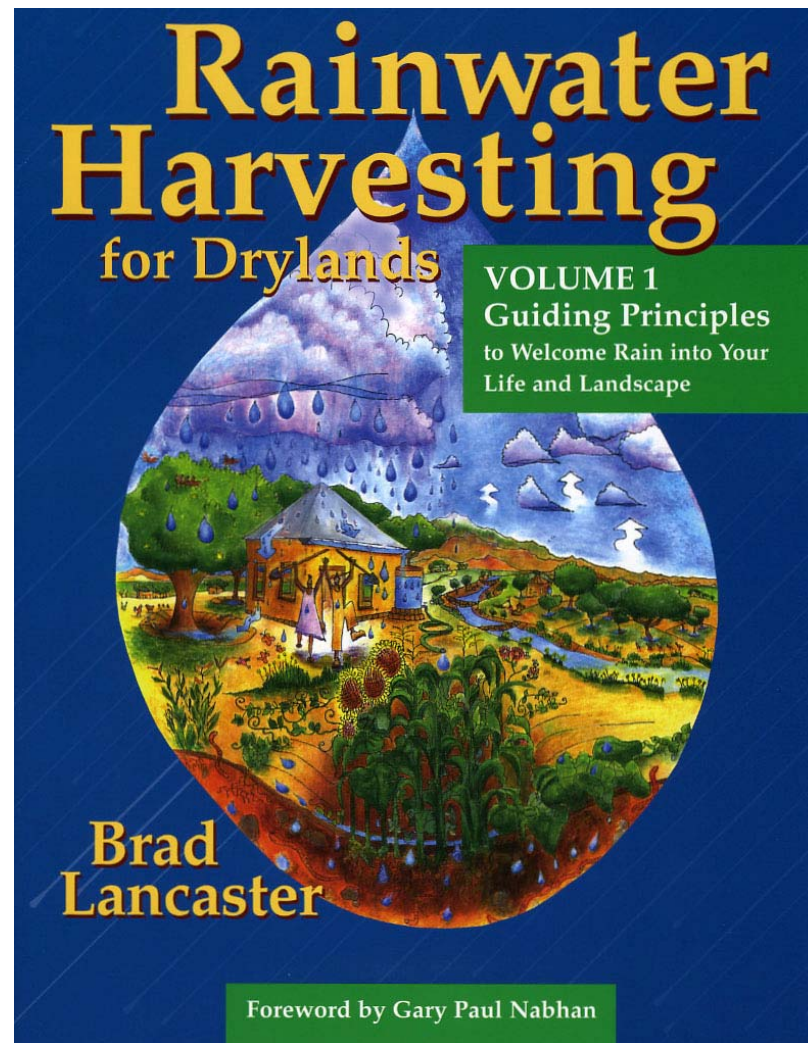












www.HarvestingRainwater.com