

# Regenerating Urban Soil Through Plant Density (Regenerative Landscaping)



*All photos courtesy of Gaia Landscapes, Inc., and Willamette Valley Regenerative Landscaping Coalition, or public domain*

# Densely Planted Landscapes



- **Improve soil**
- **Enhance the ecosystem**
- **Potentially less maintenance**
- **Potentially less cost to install**

# Improving soil

[www.notillveggies.org](http://www.notillveggies.org)

- Adding OM may not increase OM (!)
- All OM decomposes
- OM Needs to be protected
- Aggregates protect OM
- Root exudates move carbon to soil
- Organic matter is dead microbes
- Increasing photosynthesis is the key!



# Sparse vs. Dense Planting



# Plants are the key to ecosystem health

Plants do these things:  
(and more)

- Photosynthesize
- Feed pollinators
- Help with pollution
- Microclimate regulation
- Water regulation
- Protect and improve soil
- Improve health



# Willamette Valley Regenerative Landscaping Coalition

green

sustainable

regenerative

# WVRLC Guidelines

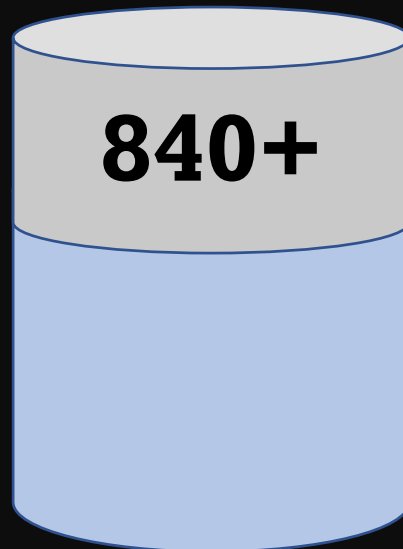
- **Minimize soil disturbance**
- **Living roots year-round**
- **Keep soil covered (with plants)**
- **Increase plant biodiversity**
- **Soil-friendly maintenance**

# Where is carbon?

Biomass



Atmosphere



Soil





**INCREASE ORGANIC MATTER 1%=**

**+ 10 TONS CARBON PER ACRE  
(IN THE TOP 12" OF RELATIVELY HEAVY SOIL)**

**= ~ 35 TONS CO<sub>2</sub> FROM ATMOSPHERE**

**City of  
Corvallis  
Public  
Works**

**Parking  
Lot Beds**



Smothers weeds

Less Mulch

Hides weeds and debris

Less fertilizer



**Gravel Mulch?**





# What about grass?

100% of soil covered

70% root mass

Regenerates soil

Succession beyond grass?

High resource use for  
pristine lawns





# Use plants as landscape solutions:

- Screening
- Shade / Microclimate Regulation
- Deal with erosion / Drainage Issues
- Noise buffering
- Windbreak



# Plant Selection

- Right plant, right place
- Experience is necessary
- Small plants disappear!



# Weed smothering shrubs









R



# Establishment Phase

- 2 to 4 years
- Water
- Weed control
- Fertilizing?
- Soil improvement?



# Cost of hardscape vs. plants





**Thank You!!!**

**Willamette  
Valley  
Regenerative  
Landscaping  
Coalition**



**[regenlandscape@gmail.com](mailto:regenlandscape@gmail.com)**