



Fact Sheet: Regenerative Agriculture \_\_

# Restoring Land & Ecosystems.

Our soils, air, water and ecosystems are inextricably tied. Regenerative agriculture recognizes that our soil is a living ecosystem comprised of billions of diverse microorganisms. They work in synergy to create an ecosystem that can store, transform and cycle nutrients in the soil, grow healthier food, retain more water and better absorb carbon that can help slow or reverse the impacts of climate change. In short, if we take care of our soils, our environment thrives. That is why Metropolitan is exploring regenerative agriculture – to create a more sustainable future and ensure Southern Californians continue to have access to safe, reliable water supplies.

## Benefits of Regenerative Agriculture



A Path  
Toward Climate  
Resiliency



Greater  
Water  
Efficiency



More  
Productive  
Crops



Greater  
Biodiversity



Above: Multispecies cover crops, such as this mix of peas, vetches, and daikons on Metropolitan land in the Palo Verde Valley, help restore soil health.

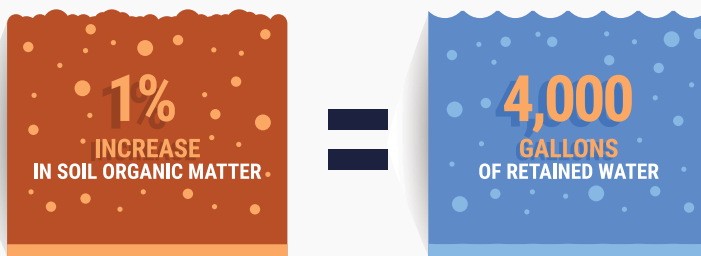
## A Key Component of Soil Conservation

Parts of the arid United States are experiencing events similar to the "Dust Bowl" of the 1930s. Erosion, caused in part by practices like excessive tillage, happens when the wind and rain carry away the nutrient-rich top layer of soil. This pattern deteriorates the quality of the soil, negatively affecting crops and sending pollution and sediment into our rivers and streams. Healthy soils resist erosion, resulting in improved air and water quality around regeneratively managed lands.

Estimated Soil Loss per Acre Annually  
By Conventional Land Management Practices



Impact of Soil Health  
On Water Efficiency



For every 1% increase in organic matter to restore the soil's fertility, an estimated 4,000 additional gallons of water are retained per acre.

## Increasing Resiliency in an Era of Climate Change

Healthy soils behave like a giant sponge, holding on to water when times are dry, and releasing it slowly when it is in excess. As healthier roots are established, the microbes in the soil become more naturally resilient to drought, reducing the amount of irrigation needed. In an age in which climate change is limiting available water supplies, increasing our water efficiency is a critical component to facing the challenges ahead.

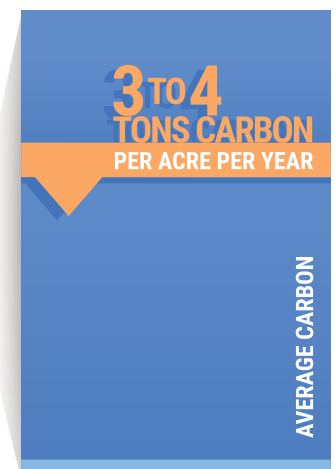
Regenerative Ag in Action \_\_

## Reducing Greenhouse Gas Emissions

As a landowner in the Palo Verde Valley, Metropolitan and its lessee HayDay Farms are participating as one of five farm sites across the United States in a Chico State University study about the potential to store atmospheric carbon in soils through regenerative agricultural practices. Researchers are examining the carbon storage benefits of:

- Soil armoring: leaving crop residue to cover the soil after harvest, without plowing
- No-till: planting crops without tilling, pushing seeds directly into the ground through the crop residue
- Multispecies cover crops: growing a beneficial and highly diverse mix of species in between crop rotations, rather than leaving the soil idle

Carbon Reductions  
At Chico State University Study Sites



### About Metropolitan

The Metropolitan Water District of Southern California is a state-established regional cooperative of 26 cities and public water agencies, which collectively serve 19 million people in six counties. Metropolitan imports water from the Colorado River and Northern California to supplement local supplies and supports its members through the development of increased conservation, recycling, storage and other resource management programs.



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