CLIMATE SMART RESILIENT GREEN CORRIDOR via BIOCHAR

Innovative and efficient technologies and practices, including the use of **Biochars**, come together in a **climate-smart** resilient **green corridor** to drive job creation, improve water and soil resources, and enhance community and economic value. These complimentary technologies amplify social and environmental benefits while lowering overall costs.

Wildlife Corridor

Wildlife corridors facilitate safe wildlife movement by connecting fragmented habitat, which supports stable populations, in addition to enhancing and protecting biodiversity.

Biochar soil amendments support stronger riparian and diverse green growth, prevent erosion/sedimentation and better protect soil and water quality.

Source Water Protection

Protecting drinking water from contamination, with forest cover for example, reduces treatment costs and public health risks, while supporting healthy watersheds and ecosystems.

Drinking Water Treatment

Innovative drinking water utilities are using the latest technology to protect source water, reduce water losses, and save energy while ensuring for clean and safe water.

Green Space

Green space provides recreation opportunities, reduces urban heat island, improves air quality and enhances the beauty and overall environmental quality of neighborhoods. Biochars strengthen and increase resilience and reduce O&M.

Wetland Restoration

Removing sediments contaminated with legacy pollutants and restoring wetlands can dramatically improve water quality. Biochars can be used for in situ treatment to reduce and eliminate pollutant exposure for sensitive ecosystems.

Gasification/Pyrolysis PFAS Treatment & Destruction

Biochars can enhance microbial degradation in WW treatment, increasing performance. WW sludge can also be gasified or pyrolyzed into biochar, while destroying PFAS. Sludge or biosolid biochars have successfully adsorbed PFAS and other toxic pollutants.

Wastewater Treatment

Innovative wastewater utilities are recovering nutrients and energy while producing reclaimed water and improving treatment efficiencies.

Riparian Buffers

Biochars strengthen roots, trees and riparian corridors expediting growth, and improving pollutant capture and climate-related resilience.

Manure-to-Energy

Manure from farms can be used to produce energy while reducing waste to be managed. Biochars can enhance AD performance.

Pyrolysis/Gasification

Thermochemical (carbon negative) processing of Ag wastes to biochars and renewable energy.

Biochar

Used on fields and in ponds, biochars can filter/adsorb pollutants, including pesticides, pathogens and fertilizers from runoff to protect water quality. Biochars can also strengthen and improve soil & plant health.

Precision & Regenerative Ag

Information technologies and regenerative practices such as cover crops reduce chemical use and harmful runoff, optimize yields and better protect soil, water and climate health.

Cover Crops

Regenerative practice made better with use of biochars.

Biochar-amended Soils

Biochars, including designer biochars restore microbial health in wetlands and soils. They can also adsorb nutrients and toxic pollutants, including heavy metals, PFAS, and other organics and inorganics, which have impacted source waters and drinking water.

Biochars can enhance effectiveness of green roofs for storage, filtration and greater vegetative strength.

GI – Bioretention and Green Streets

Green infrastructure (GI) reduces and treats stormwater at its source while providing other community benefits. High-flow bioretention filter media using biochars and other biochar-enhanced GI applications for management of runoff in transportation right-of- ways increase infiltration, volume storage capacity and pollutant removal.

Biochar "Community Carbon Sink"

Biochars can regenerate soil, increase soil water storage, reduce erosion and protect water quality by adsorbing pollutants and enhancing healthy microbial activity. The addition of negatively sequestered biochars as long-lasting recalcitrant carbon in soil also reduce GHG's and can be marketable for significant carbon credits and $$.

Green Streets & Roadways

High-flow filter media with biochars increase filtration, infiltration, water storage and pollutant removal, including TSS, nutrients, heavy metals and other toxics.

Smart Stormwater Ponds

Smart ponds are weather- responsive, have increased storage capacity, and better protect water quality. Biochars can serve as innovative pond treatments to better address excess bacteria and nutrient loadings. Biochars can also adsorb toxics in ponds, better protecting aquatic life.