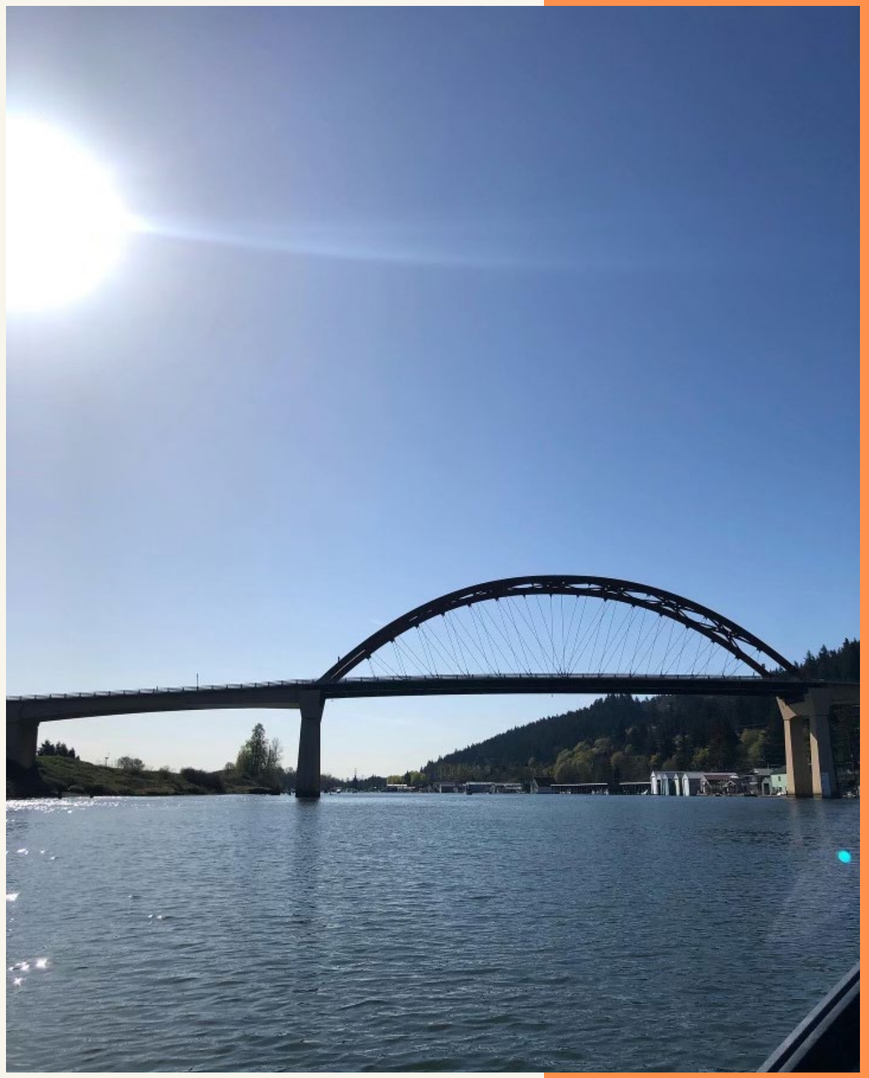
Is Bokashi the Solution to Pollution?

Suscol Intertribal Council



Wapato Island - Portland, OR

Cuauhtemoc Villa

groundculturepdx@gmail.co

www.groundculturepdx.co

Beneficial Microorganisms

Teraganix

SCD Probiotics

Dr. Teruo Higa
Founder of EMRO

“Effective Microorganisms” (EM)

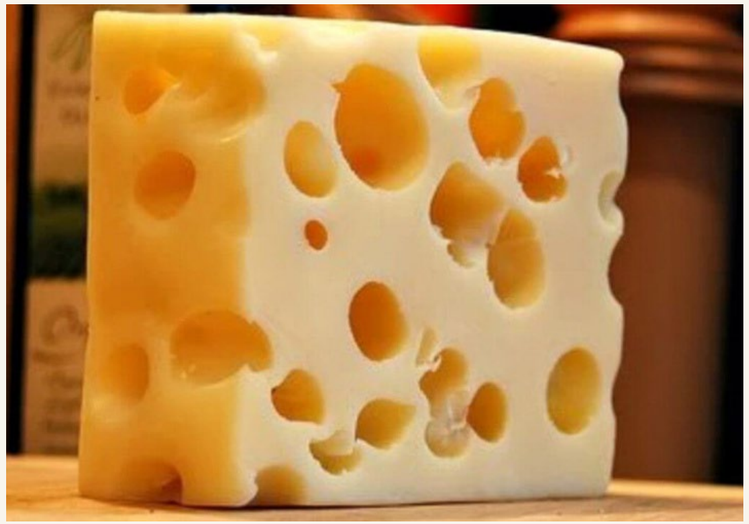
Ainu

Japanese Natural Farming Practices

Beneficial Microorganisms

Food - grade microbes + fungi are used to make Bokashi. Microbes ferment organic matter - our wastes!

Lactic Acid Bacteria

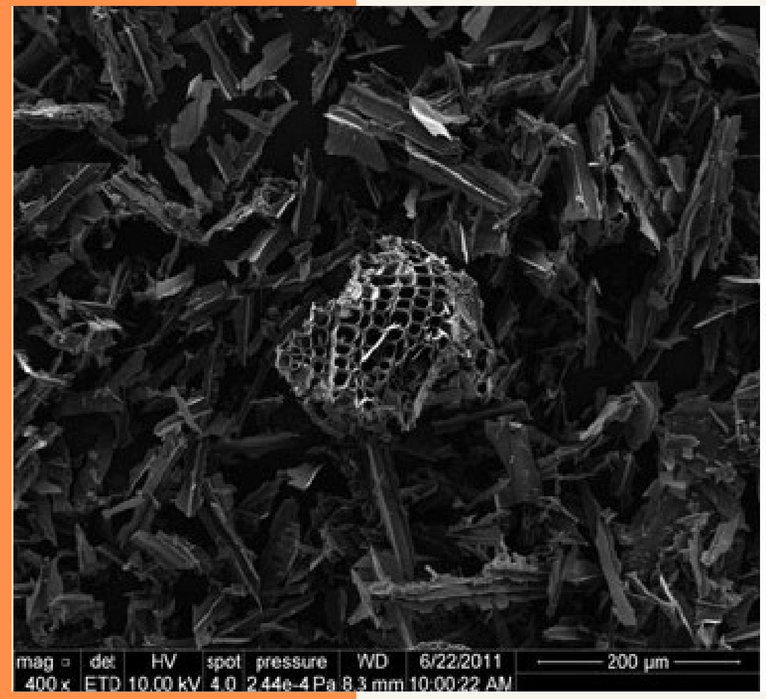


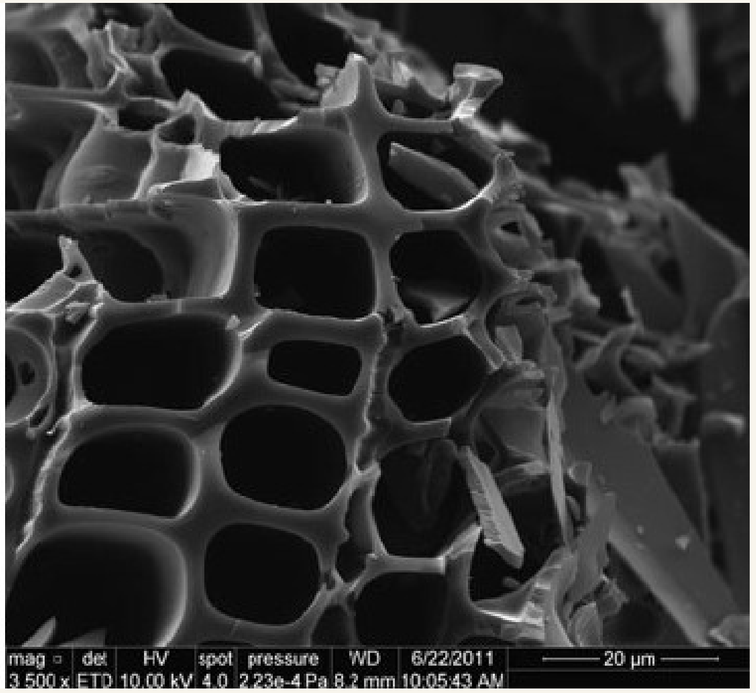
Purple Non - Sulfur Bacteria

Yeasts

Benefits of Biochar

- Increases water holding capacity
- Microbial + fungi residence
- Adsorption properties for nutrients
- Raises EC potential in soil
- Carbon sequestration
- Fuel reduction for wildfire prevention
- Soil “memory” holding capabilities
- Water filtration capacity





Carbon +
Microbes

Fermenting local waste stream - coffee shaft - with beneficial microbes

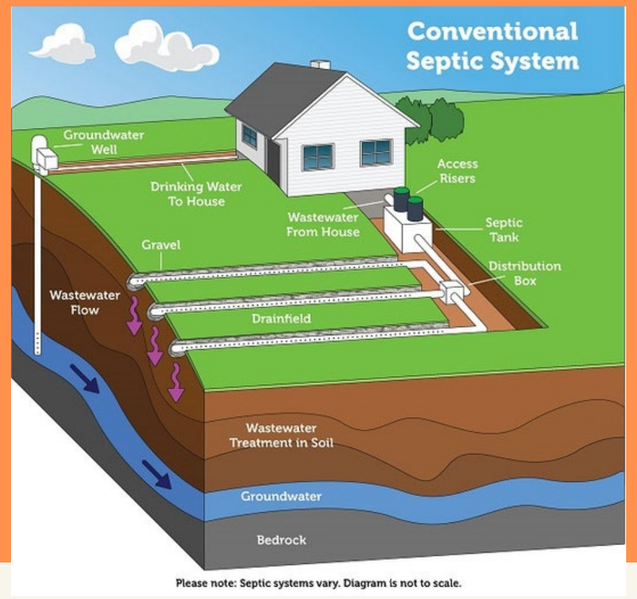
Bokashi

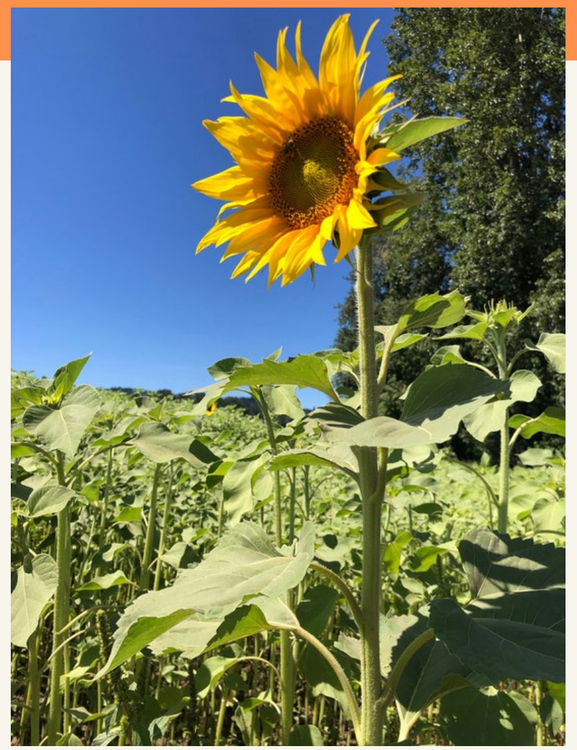
Fermentation composting, or bokashi composting, can quickly breakdown large amounts of food and agricultural wastes. Using beneficial microbes, waste streams can be rapidly converted to a usable fertilizer source that can be returned to local farms, restoration projects + sold as a gardening product.

EM and Bokashi Uses

Land Management + Pond Care

Stormwater Management





Gardening + Farming

Global Movement

Large Scale Water Treatment with Effective Microorganisms (EM)

Global projects beginning in 2005

Nihonbashi River Cleanup in Japan - EMRO partners with local citizens and government for waterway cleanup

Hurricane Katrina - Non-profit Common Ground Relief distributes EM in toxic mold cleanup efforts

EM Universal Village

Okinawa, Japan

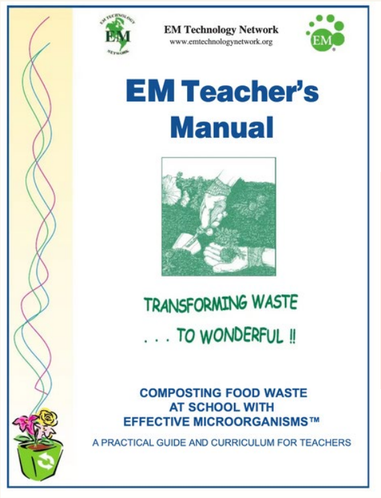
www.emrojapan.com/case/detail/155

Large Scale Bokashi Composting

Community Compost Center
Okayama, Japan
Bokashi Fermentation Composting

www.emrojapan.com/case/detail/53

World EM Mudball Day



EM Curriculum in Universities + Schools Globally

Latest Research + Field Studies in Partnership with MIT

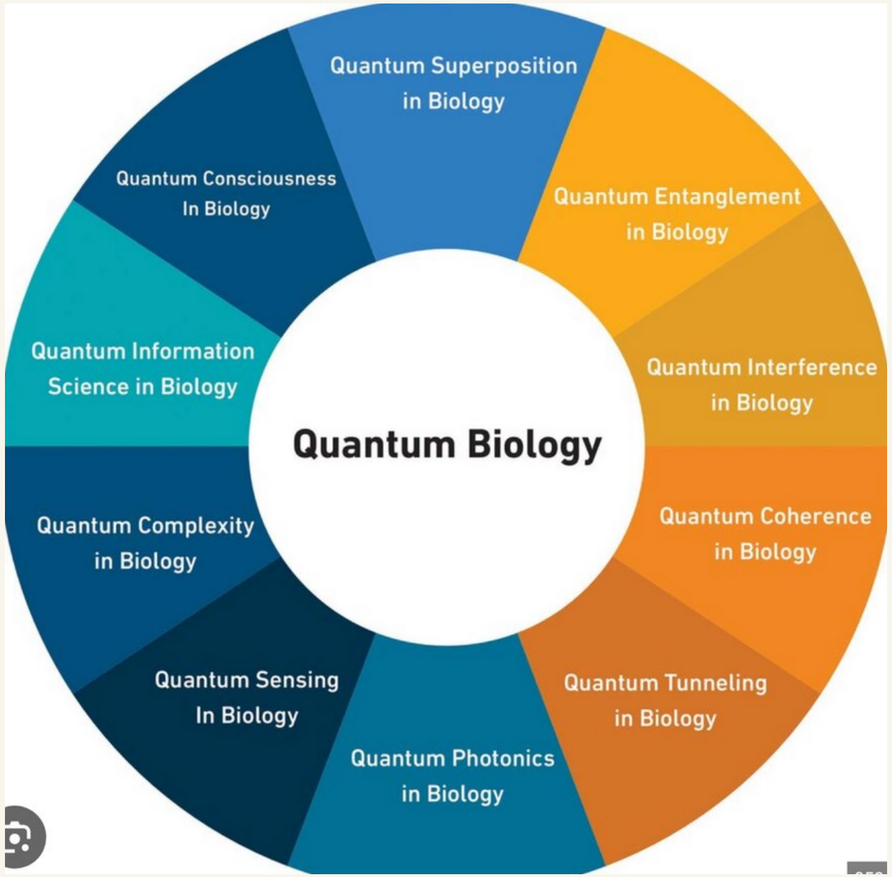
https://www.youtube.com/watch?v=v0f0_BG5EPw

Bokashi's Ability to Handle Waste + Polluition

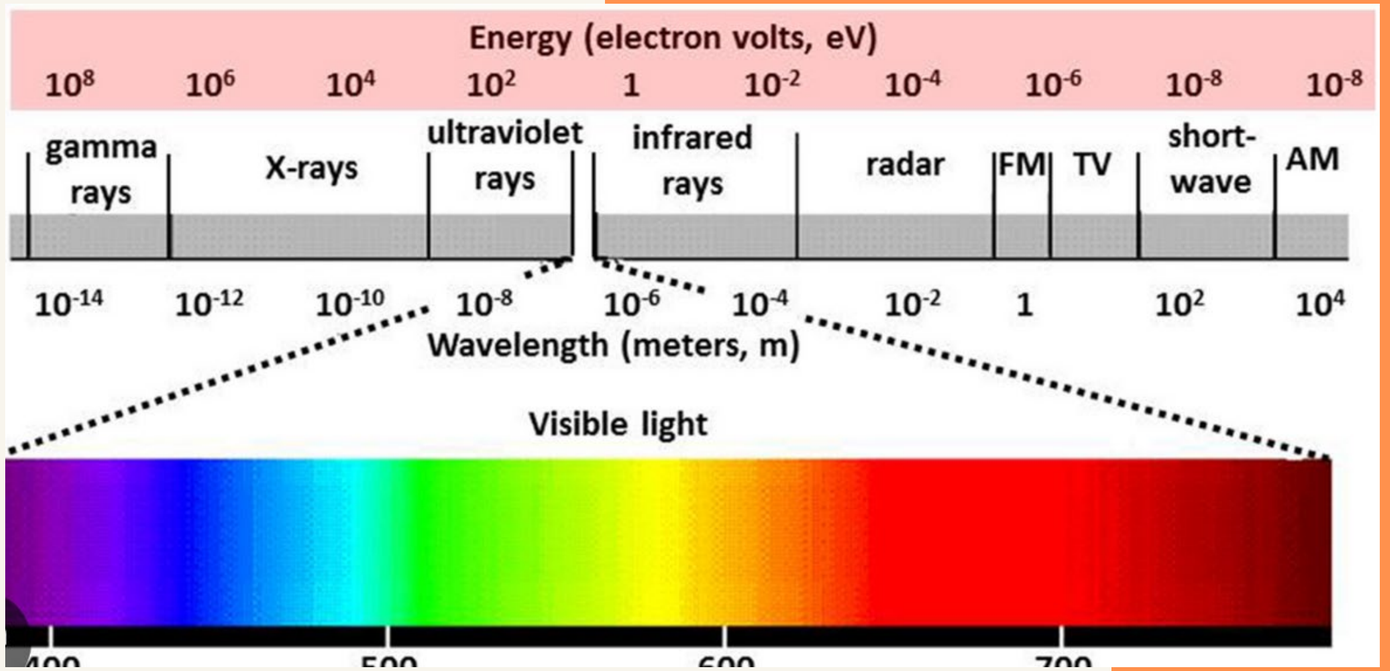
Toxic Compounds

Beneficial Microorganisms -
Electron Donors

Capacity to make toxic compounds inert

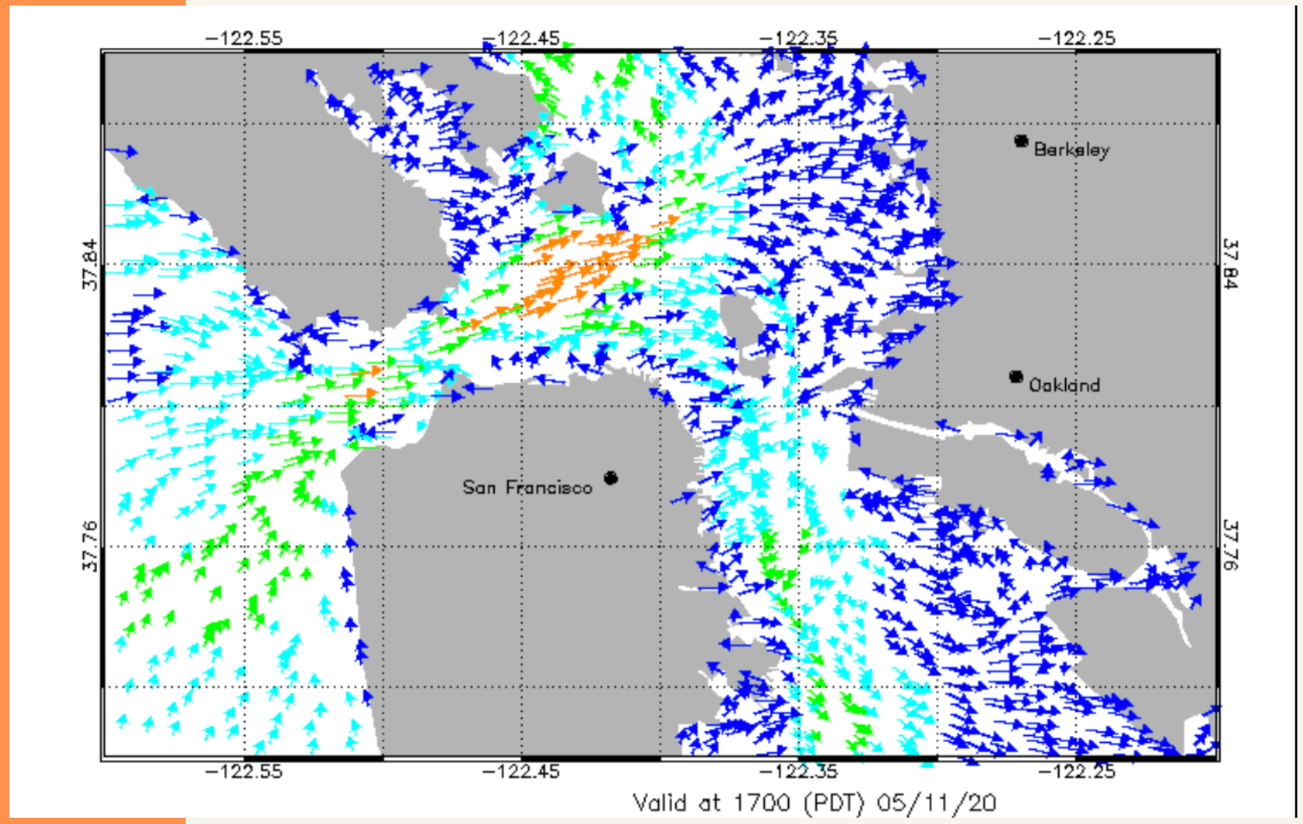


Electromagnetics



Beneficial Microorganisms -
Electromagnetic Influence
Far Infrared Spectrum

SF Bay Locations for Treatment

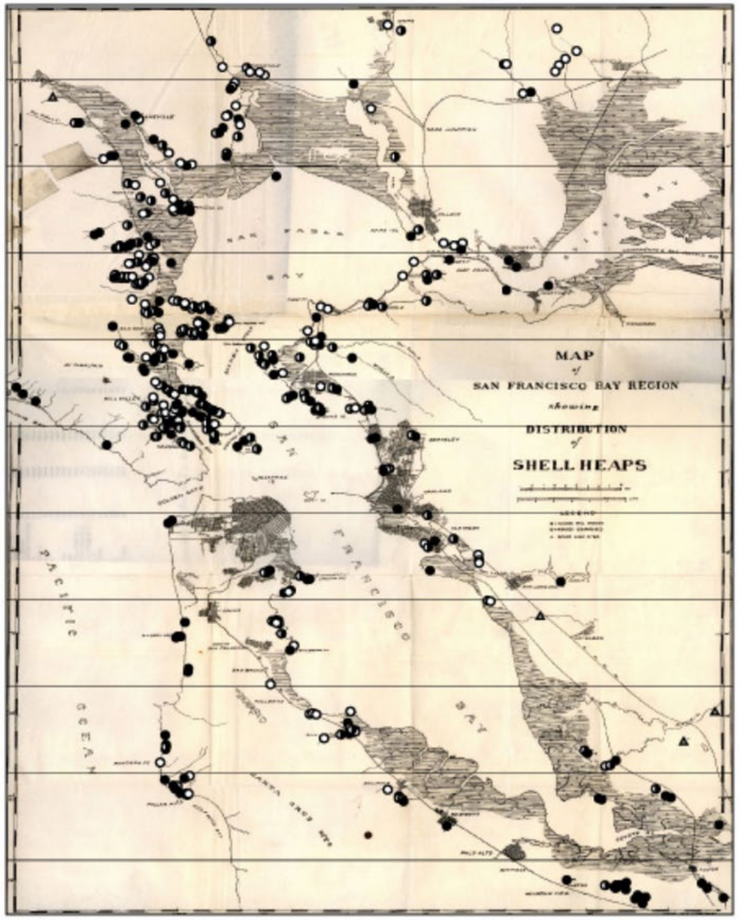


Indicator Species

Unique Case Study

Shell Mounds of the Bay

Shellmounds in San Francisco Bay Area, 1909



During the first years of the twentieth century, University of California archaeologist N.C. Nelson mapped shellmounds still present around the shores of San Francisco Bay. Nelson published his map in 1909, showing over four hundred shellmounds ranging in size from a few meters in diameter to tens of meters in diameter.

An act of desperation in the face of rapid change, Nelson's map was hastily made and lacks precision. It is however a stunning reminder of the inhabitedness of San Francisco Bay: Thousands of years of native peoples living in and changing San Francisco Bay.

Shell Mounds and Camps

- Camps
- Disappeared, Mounds
- Partially Present, Mounds
- Fully Present, Mounds

Matthew Booker and Allen Roberts / Spatial History Lab, Stanford University

Workshops + consultations
for schools, nonprofits,
community centers + agencies

groundculturepdx.com

We can partner with microbes
to clean toxic soil
and waterways

Cuauhtemoc Villa

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