



Biochar journey map from 2024 US biochar industry convening.

Biochar Markets Are Alive And Growing

The journey on the biochar map shows humble beginnings in 2006, started by researchers and enthusiasts, and illustrates the transition to an industry on its way to maturity. The first quarter of 2024 saw a significant increase in interest in biochar products and market development. As late spring approaches, commercial biochar networks have been very active. Biochar producers are looking for markets, while consumers seek help with applications. Grand schemes have been announced. New models of conversion systems have been displayed. Producers have made great progress in showcasing the uses of biochar, from reducing the carbon intensity of building products to managing manure on dairy farms.

USBI collaborates with all sectors of the industry to address key challenges For example, the lack of consistent and accessible laboratory analysis standards has hindered biochar production and use. Current biochar standards are based on European methods, limiting analysis to just a few North American laboratories. USBI has convened an industry group to launch the development of new laboratory standards in partnership with the American Society of Agricultural and Biological Engineers (ASABE) and the American National Standards Institute (ANSI). These standards will create independent laboratory guidelines that can be used by any North American laboratory, and those in other parts of the globe, serving as a foundation shared among different organizations to provide consistent laboratory results.

Biochar is a new pathway for green solutions in municipal infrastructure. For many years farmers have returned nutrients in biosolids from wastewater treatment to soil in liquid form or in compost. **Municipalities are now discovering that pyrolysis of biosolids - turning them into biochar - can remove harmful "forever chemicals"**

like PFAS - and protect the soils from harm. California's Bioforcetech plant has been the sole commercial biosolids biochar facility. Two new biosolids carbonization facilities are currently being launched, with more in the planning stages. These biochar plants help control odors, decrease truck traffic, and provide additional options for biosolids disposal, offering valuable services to communities. We look forward to the success of these new facilities.



Tom Miles
Executive Director

Looking to the Future with Myles Gray

Biochar Industry Convening

Last week USBI participated in an “industry convening” that focused on building the biochar industry in the United States. The event was held in Minneapolis April 29th and 30th and was hosted by the US Endowment for Forestry and Communities and Fountainworks (public impact advisors). Key biochar organizations, USDA NRCS and ARS, US Forest Service, and biochar producers participated.



The event highlighted the critical need to develop markets for physical biochar, supporting similar findings from the recently completed **Global Biochar Market Survey**. Based on these findings, USBI will focus on market development as our top priority in the years to come. We’re working to develop a framework for end-use market development that will feature collaboration with experts and practitioners in each end-use market to make sure we are hitting the mark. We’ll also tackle demonstration projects, research and development, and guidance document development in collaboration with key end-use practitioners. Targeting key market conferences and events will be another key component of our strategy. Our initial end-use market targets will include biochar as a soil amendment, biochar-enhanced fertilizers, potting and

horticultural growing media, concrete, stormwater, and others.

During this "industry convening", we also highlighted the need to support policy that helps incentivize biochar's use in the private sector and by local, state, and federal government agencies, to simplify permitting for biochar facilities, to build technology neutral tax credits for carbon removal technologies, and more. United States Biochar Coalition's Maureen Walsh led the way in these discussions, and USBI is looking forward to future collaborations with this group.

The event was well-received by all, and Fountainworks will be collaborating with USBI and the US Endowment to complete a report summarizing the event to be released in June.

Myles Gray
Program
Director



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Biochar Conference 2024 Presenter Slides

Access the presentation slides from our 2024 North American Biochar Conference. biochar-us.org/biochar2024 *Seeing is believing!* Look for video links in the next newsletter and subscribe for [YouTube channel](#) updates. While you are waiting, check out our fantastic content already on the channel covering topics like Stormwater Management, USDA NRCS Code 336, Biochar in the Woods,

Access NABC24 Presenter Slides

US Composting Council NOS Meeting Update



US Composting
Council®

Contribution by Linda Norris Waldt,
[USCC](#).

In this month's newsletter, we are including this update from our partners and friends at the USCC. This gets a bit technical but since biochar markets in the US may be indirectly affected in a few ways by the actions of the National Organic Standards Board (NOSB) - particularly as we see more Organics Recyclers adopt biochar - we felt it important to share widely.

The primary topic is compost production and standards set by the NOSB with a focus on composting practices and regulations for organic agriculture. There are three areas to watch where we may see impact on US biochar producers.

amendments like biochar, as both processes involve organic materials and soil enhancement. **Testing and Certification:** The mention of the STA Certified Compost testing program highlights the importance of rigorous testing for organic soil amendments. Biochar producers are encouraged take note of this emphasis on testing protocols and consider similar certification programs or quality assurance measures for their products.

Feedstock Considerations: The discussion on compostable packaging in organic agriculture raises questions about acceptable materials for organic soil amendments, which may also interest biochar producers regarding feedstock

Regulatory Standards: Changes in compost production standards could set precedents or influence regulations for other organic soil

use, particularly for organic certification or market acceptance.

USCC, Composters Submit Comments to National Organic Standards Board

In response to a document published by the National Organic Standards Board's Crops Subcommittee, the [USCC submitted comments](#) focused on questions about compost production for the NOSB's upcoming meeting from April 29 to May 1, 2024, in Milwaukee, WI. The feedback addressed the NOSB's questions on production practices for potential organic-use compost, including advancements in technology since standards were last set, carbon-to-nitrogen ratios, contamination, and inspection practices. The USCC argues that best-practice contamination reduction policies practiced by compost manufacturers currently producing organic-use products are significant and protective, rendering inspections unnecessary. Additionally, the USCC proposes that the STA Certified Compost testing program is a valuable tool for evaluating compost for organic use, given its rigorous tests for metals and pathogens. The USCC emphasized that the American Association of Plant & Food Control Officials' 2018 official definition of compost should be incorporated into the National Organic Program rules.

The USCC has not yet taken a position on a request by the Biodegradable Products Institute regarding the use of compostable packaging as a feedstock in compost for organic agriculture. Current rules prohibit packaging as a "synthetic" substance. Last winter, the USCC's board surveyed USCC compost manufacturers and members (see results here) to determine whether the organization should support reopening the NOP rules to discuss compost issues. However, the organization has not yet decided whether to support the use of packaging that meets ASTM standards in compost for organic agriculture. A final position will be determined in time for the NOSB's fall meeting, following extensive discussion among USCC compost manufacturers, the STA Advisory Committee, the Legislative and Environmental Affairs Committee, and the Market Development Committee.

The USCC invited compost manufacturers to provide comments through the Compost Action Center; see [comments here](#).

HOT NEWS: Laws & Permitting

Feds Remove Title V Permitting on Air Curtain systems

On April 17th, 2024, EPA removed a massive barrier - high cost to entry - for the place-based biochar market interested in using Air Curtain systems like the Air Burners, CharBoss, and other mobile carbonators.

HOT NEWS!!!

Title V Permitting Reformed!
Effective 4/17/24 ACI systems no longer require Title V permits.

This is very important to the biochar industry as these types of mobile, multi-functional, place-based biochar systems as



they are an excellent entry point into the biochar industry for composters, land owners, clean C&D waste disposal facilities, municipalities and many more sectors. Not to mention the disaster cleanup opportunities to convert hazardous fuels to biochar for durable carbon benefit after an event and the potential to scale quickly.

[Read extended Air Curtain permitting article](#)

More Exciting News! Washington State Removes Ban on Flame Cap Biochar

Legalizing flame cap kilns allows residents to utilize flame-cap kilns for biochar production, offering a clean, efficient alternative to open pile burning. The new law establishes clear regulations for these kilns, distinguishing them from burn barrels and addressing concerns about air pollution, says circular design and strategy consultant Korina Stark. It not only promotes sustainable forestry practices, soil health, and carbon sequestration but also lays the groundwork for a burgeoning biochar industry in Washington.

Governor Jay Inslee signed SB 6121 into law on March 26th, 2024, thanks to the determined efforts of advocates and supportive legislators.

Team Advocacy Worked!

SB 6121 emerged amidst debates over flame-cap kilns' environmental impact.



The resulting legislation was the work of many. The Washington Farm Forestry Association's Elaine Oneil and Nora Palattao Burnes conceived of and championed the bill. They were bolstered by testimonials from forestry service providers and small landowners like Jake Dailey and Korina Stark and the tireless engagement and advocacy of a broad, state-wide coalition.

SB 6121's passage reflects a growing understanding of biochar's environmental benefits and underscores the importance of sustainable solutions.

[Read full story on USBI site](#)

USBI BOARD CORNER CHARLES

"CHUCK" HEGBERG
USBI Board Vice Chair

Environmental Restoration Specialist,
[Resource Environmental Solutions, LLC](#)
[\(RES, LLC\)](#)

Chuck began his environmental career during



the inception of the Chesapeake Bay Restoration Program in 1987, where he targeted non-point source pollution in urbanized areas, focusing on nutrient and runoff reduction.

Learn more about
Chuck

Biochar Funding Opportunities

USDA NRCS Code 336 Soil Carbon Amendment

Through the National Resources Conservation Service's Environmental Quality Incentives Program, agricultural producers can apply for financial assistance under Practice Standard 336. Deadlines vary by state. [More information here.](#)

DOE Opportunities

On February 12, 2024, the U.S. Department of Energy's (DOE) Office of Fossil Energy and Carbon Management (FECM) announced up to \$100 million to help develop a commercially viable carbon dioxide removal industry in the United States. This includes opportunity for biochar projects. [Carbon Negative Shots - Pilot Program Funding](#)

Outreach and Education

WEBSITE UPDATE - BIOCHAR-US.ORG

DIRECTORIES - USBI has been updating our directories to increase visibility for biochar producers, distributors, professional service providers, TSPs, labs, regional groups, and more.

Chances are you can find what you need on the USBI directories! Additional improvements to the experience will be showing up over the coming months.

EVENTS - A new and improved events list is coming to biochar-us.org. This new system will show all the great events and allow submission of upcoming events with a convenient online form.

Check Out USBI Directories By Category!

Join the USBI Directory!

We are building the most comprehensive biochar directory for the US market.

Join the directory, search by category, and use the directory to connect with others in the North American biochar network. Together we are putting the world's carbon budget back in the black!

- Biochar Producers
- Biochar Distributors
- Biochar Equipment Manufacturers

This month, we welcome biochar producer [NY Carbon](#) to our biochar community!

Contact john@biochar-us.org with questions.

Get Your Directory Listing

What to Watch

[Scaling UP Biochar - Chesapeake Bay Series](#) | View 5 videos from this cooperative group of entities seeking to use biochar amendments in urban landscapes, with the ultimate goal of reducing runoff and enhancing water quality across the Chesapeake Bay Watershed | National Fish and Wildlife Foundation, Center for Watershed Protection, University of Delaware, Infinite Solution, &USBI

[Tax Incentives: Energizing Biochar Finance w Waste Heat Power Generation](#) | Learn how the addition of zero emissions power production can help unlock Income Tax Credit (ITC), Production Tax Credit (PTC), and Direct Pay opportunities which will reduce overall costs to stand-up a project and become operational. | Eletratherm & KE Andrews

[Beyond the VCM and Insetting with Biochar](#) | Insetting webinar with USBI | Biochar offsets are investments in external biochar projects that are not directly related to a company's operations while insetting focuses on investments that integrate biochar in the delivery of a company's products and services. | AirMiners, ecoLocked, CarbonPilot, and NovoCarbo



What to Read

[Market Analysis of Coupled Biochar and Carbon Credit Production from Wildfire Fuel Reduction Projects in the Western USA](#) | The investment potential for biochar production from low-value forest biomass in the western USA is over USD 20 billion at current carbon prices. | Contributing author Josiah Hunt, USBI Board Member

[Biochar and Forests - Soil Restoration with Biochar](#) | USFS research shows biochar is a transformative tool for enhancing soil health and supporting thriving forest ecosystems. | USFS Rocky Mountain Research Station

[Mining for Answers: Using Biochar to Remediate Abandoned Mine Lands](#) | Research shows a promising solution incorporating biochar into mine spoils to improve soil quality. | USFS Rocky Mountain Research Station

[A Biochar Selection Method for Remediating Heavy Metal Contaminated Mine Tailings](#) | Biochar properties (e.g., alkaline pH, metal sorbing capabilities, available nutrients, improved soil water retention) make it a potential amendment for remediating metal contaminated mine tailings. | Contributing author Kristin Trippe, USBI Board Member **Book Releases!**

[Biochar For Environmental Management, 3rd Edition](#) | Pre-order for June | Johannes Lehmann & Stephen Joseph

[The Biochar Handbook by Kelpie Wilson](#) | Pre-order | Kelpie Wilson, former USBI Board



**“This book is an absolute tour de force ...
Everyone from newbies to those who
have been in the biochar industry for
years will learn a lot!”**

Kathleen Draper, coauthor of BURN
Former Board Chair, International Biochar Initiative

Pre-order now from your favorite bookseller

Biochar Events Calendar

Connect and collaborate at in-person or online events!

May 2024

May 15-16 **[A Sustainable Future: The Global Energy Transition Conference](#)** will feature not only leading speakers from government and industry, but also confidential, Chatham House Rule roundtable conversations among participants. Get a better game plan for taking advantage of the global energy transition. New York, NY [Register here](#).

May 17 **[MNBI CharTalk Webinar](#)** Noon-1pm CT | Biochar Effects on Nitrification in Sequencing Batch Reactors - Mariah Dorner Ph.D. Candidate - University of Minnesota [Linkedin Event Details](#)

May 22 **[Biochar and Soil Amendments](#)** 12 to 1 pm EST | **Free Webinar, Grow Strong Hudson Valley** hosted by Dr. Deborah Aller (USBI Board Member) & Grow Strong Hudson Valley

May 21-23 **[Carbon Unbound Eastcoast](#)** New York City | Business leaders, investors, buyers and policy makers meet to discuss the future of carbon removal. **[Limited ticket availability](#)**

May 28 **[Carbon Finance: Unlocking the Potential of Biochar](#)** | Webinar 12pm EST | **Flowcarbon** | Learn about the pivotal role biochar can play as a sustainable solution to climate change w panelist Myles Gray, USBI Program Director. [Register](#)

May 30 **[Benefits of Biochar in California Orchards](#)** - Free In Person Workshop 9am to noon | Hosted by Pacific Farming Company & American Farmland Trust | Attendees will also learn about a biochar field trial at Pacific Farming Company, Madera, CA. [Register here](#).

June 2024

June 1 **[An Introduction to Biochar Production and Use Workshop](#)** 11am – 4 pm | **Hunt Country Vineyards** | Kathleen Draper (Carbon Standards International, Finger Lakes Biochar, USBI Board Member) will lead this one-day workshop on biochar production, feedstocks and uses. Branchport, NY

September 2024

September 24–26 **[Inaugural Great Plains Biochar Conference](#)** All Day | Hosted by the University of Nebraska–Lincoln, Nebraska Biochar Initiative, and Nebraska Forest Service | Researchers, educators, farmers, and producers will discuss biochar's full potential | Lincoln,

Let USBI help promote your biochar event. Contact john@biochar-us.org.

See More Biochar Events

Looking for biochar industry career opportunities?
Check out LinkedIn for sales, research, internship postings, and more!



Biochar Newsbytes



[Upstate New York County Officials Initiate Discussion of Multi-million Dollar Biosolid to Fertilizer Project](#) The biggest hindrance to the project is public opinion, said Northeastern Biochar President last month.

« After biosolids remain in digesters like these for 12 days, they become farm fertilizer which has a cake-like texture. Courtesy of KCET/SoCal Connected-PBS Los Angeles

[Biochar - Solution to Maryland's Rising Sewer Sludge](#) Nexus W2V's Allegany County project plans to transform waste into biochar and apply it to farmland to encourage crop fertility.

Image is representative of Nexus W2V biochar plant. »



[The Incredible Food Waste from Agriculture – Biochar to the Rescue](#) Biochar is included in federal funds that incentivize climate-friendly farming practices that help reduce food waste from agriculture.

Missouri farmer Nick Cuchetti loves “educating people on » regenerative agriculture and what they’re actually buying.”



Now Legal to Use Flame Cap Kilns in Canada Getting a burn permit is a big win for Toledo-based agroforestry and conservation startup Rake Force. Legalizing flame cap kilns in Toledo follows a similar decision by Washington State to also legalize flame cap kilns for biochar production.



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