

## LIST OF ABBREVIATIONS

The following abbreviations are used throughout this document. Please refer to this table where definitions are not provided following the term in the text.

Abbreviation	Definition		
<i>AAPFCO</i>	Association of American Plant Food Control Officials	<i>DMDS</i>	dimethyl disulfide
<i>ACI</i>	air curtain incinerators	<i>EBC</i>	European Biochar Certificate
<i>ARS</i>	USDA Agricultural Research Service	<i>EBBCD</i>	Endowment for Biochar-Based Community Development
<i>ATC</i>	Authority to Construct	<i>EPA</i>	U.S. Environmental Protection Agency
<i>BACT</i>	Best Available Control Technology	<i>EPCRA</i>	Emergency Planning and Community Right-to-Know Act of 1986
<i>BD</i>	bone dry	<i>EQIP</i>	Environmental Quality Incentives Program
<i>BRDI</i>	Biomass Research and Development Initiative	<i>ERC</i>	Emissions Reduction Credits
<i>BPS</i>	biochar production systems	<i>EU</i>	European Union
<i>BUC</i>	Biomass Utilization Campus	<i>FDA</i>	U.S. Food and Drug Administration
<i>C</i>	carbon	<i>GHG</i>	greenhouse gas
<i>CAGR</i>	compound annual growth rate	<i>GRACEnet</i>	Greenhouse gas Reduction through Agricultural Carbon Enhancement network
<i>CARB</i>	California Air Resources Board	<i>REET</i>	Greenhouse gases, Regulated Emissions, and Energy use in Technologies
<i>CDEA</i>	California Department of Food and Agriculture	<i>Gt</i>	gigatonne or billion metric tonnes
<i>CEC</i>	cation exchange capacity	<i>GT</i>	gigaton or billion U.S. tons
<i>CEQA</i>	California Environmental Quality Act	<i>GWP<sub>100</sub></i>	global warming potential
<i>CFLRP</i>	USDA USFS Collaborative Forest Landscape Restoration Program	<i>ha</i>	hectare
<i>CGIAR</i>	Consortium of International Agricultural Research Centers	<i>HAP</i>	hazardous air pollutants
<i>CH<sub>4</sub></i>	methane	<i>HCl</i>	hydrogen chloride
<i>CHAB</i>	combined heat and biochar	<i>HPLC</i>	high performance liquid chromatography
<i>CISWI</i>	Commercial and Industrial Solid Waste Incineration Units	<i>HRA</i>	health risk assessment
<i>Cl<sub>2</sub></i>	chlorine gas	<i>IBI</i>	International Biochar Initiative
<i>CO</i>	carbon monoxide	<i>IPCC</i>	Intergovernmental Panel on Climate Change
<i>CO<sub>2</sub></i>	carbon dioxide	<i>KMnO<sub>4</sub></i>	potassium permanganate
<i>CO<sub>2e</sub></i>	carbon dioxide equivalent	<i>LCA</i>	life cycle assessment
<i>CO<sub>2e</sub> T<sup>-1</sup></i>	carbon dioxide equivalent per ton	<i>LCFS</i>	Low Carbon Fuel Standards
<i>CY</i>	cubic yard	<i>LTBR</i>	long term biochar research

<i>MMBtu</i>	1 million BTU British Thermal Unit.
<i>MSW</i>	municipal solid waste
<i>Mt</i>	megatonne or million metric tonnes
<i>MT</i>	megaton or million U.S. tons
<i>MW</i>	megawatt (can refer to energy content of biomass going into the plant as well as energy output by the plant)
<i>MWe</i>	megawatt of electrical output (by an energy plant)
<i>NAAQS</i>	National Ambient Air Quality Standards
<i>NEPA</i>	National Environmental Policy Act
<i>NGO</i>	non-governmental organization
<i>NH<sub>3</sub></i>	ammonia
<i>N<sub>2</sub>O</i>	nitrous oxide
<i>NO</i>	nitric oxide
<i>NO<sub>2</sub></i>	nitrogen dioxide
<i>NO<sub>3</sub><sup>-</sup></i>	nitrate
<i>NOx</i>	generic term for the nitrogen oxides that are most relevant for air pollution, namely nitric oxide and nitrogen dioxide
<i>NRCS</i>	Natural Resources Conservation Service
<i>NREL</i>	National Renewable Energy Laboratory
<i>NSR</i>	New Source Review
<i>NWFP</i>	Northwest Forest Plan
<i>O<sub>3</sub></i>	ozone
<i>ODEQ</i>	Oregon Department of Environmental Quality
<i>ODT</i>	oven dry ton
<i>OFRI</i>	Oregon Forest Resources Institute
<i>OMRI</i>	Organics Materials Review Institute
<i>OSWI</i>	Other Solid Waste Incinerators
<i>PAH</i>	polycyclic aromatic hydrocarbons

<i>Pb</i>	lead
<i>PM</i>	particulate matter
<i>PM<sub>2.5</sub></i>	particulate matter with a diameter 2.5 micrometers or smaller
<i>PM<sub>10</sub></i>	particulate matter with a diameter of 10 micrometers or smaller
<i>PNW</i>	Pacific Northwest
<i>ppbv</i>	parts per billion by volume
<i>PSD</i>	Prevention of Significant Deterioration
<i>PTO</i>	Permit to Operate
<i>RCPP</i>	Regional Conservation Partnership Program
<i>RFRS</i>	Remote Forest Research Stations
<i>ROG</i>	reactive organic gases
<i>SEPA</i>	State Environmental Policy Act
<i>SO<sub>2</sub></i>	sulfur dioxide
<i>TPY</i>	tons per year
<i>USBI</i>	United States Biochar Initiative
<i>USDA</i>	United States Department of Agriculture
<i>USFS</i>	United States Forest Service
<i>VOC</i>	volatile organic compounds
<i>wt. %</i>	percent by weight