# EREF Strategic Priorities RFP

**Background**
The sustainability movement has reached the business models of nearly every industry in the United States, and many companies, municipalities and states have set aggressive sustainability goals that include how waste streams are being managed. The EREF Board of Directors has set an initiative to ensure the research we fund reflects EREF's long-term strategic plan to address all areas of integrated solid waste management, with a strong focus towards research that increased sustainable solid waste management practices.

EREF is an IRS 501(c)3 non-profit organization and is one of the largest sources of funding for solid waste research in North America. EREF is not affiliated with any other entity or group and governed by a duly elected Board of Directors. The Board of Directors is the decision-making body that has responsibility for establishing policies that define program interests and fundamental objectives to be served by the Foundation.

**Strategic Research Priorities**
EREF's Board of Directors has identified 3 key Priorities that focus on the impacts of solid waste management, circular and sustainable materials management, and mitigating environmental risk and/or harm:

| PRIORITY | PRIORITY | PRIORITY |
|---|---|---|
| **Climate Change Impacts/Greenhouse Gas Emissions** | **Emerging Contaminants** | **Advancing Materials Circularity & Recycling** |
| 1. Quantification of greenhouse gas emissions, including direct measurement, modeling, data & methodology<br><br>1a. Efficacy of direct emissions measurement technologies and variables that impact their ability to quantify whole site landfill emissions<br>1b. Comparing the accuracy of landfill models and GHG reporting methodologies relative to direct measurement technologies<br>1c. Understanding the contribution of GHG emissions from landfills due to hotspot sources versus typical gas field maintenance/upgrade activities. | 1. Potential impacts of emerging contaminants on waste management operations including leachate disposal/treatment, composting facility operations, anaerobic digestion facilities and digestate management<br><br>1a. Relative contributions of PFAS to and from receiving solid waste management facilities (e.g. landfills, MRFs, compost facilities)<br>1b. Economic impacts of PFAS management at solid waste facilities<br>1c. Potential impacts of PFAS on compost or anaerobic digestion facility operations and facility outputs (e.g., produced compost, AD effluent) | 1. Evaluation/efficacy of policies that impact waste management or circularity<br><br>1a. Measuring and evaluating the effect of extended producer responsibility frameworks<br>1b. Quantifying the effectiveness of bottle bills<br>1c. Evaluation of source separated organics management policies and the efficacy of those policies to improve materials circularity |
| 2. Impacts & reduction strategies from waste management collection & disposal options, | 2. Fate and transport/environmental and health impacts from emerging | 2. Assessment of trade-offs between environmental burdens associated with circular priorities (e.g., via LCA) |

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| including waste-to-energy, landfill gas to energy, etc. | contaminants, including those managed by waste facilities<br><br>2a. Assess the potential fate and transport/environmental health impacts of PFAS from waste collection through final disposal<br>2b. What are the exposure pathways of PFAS from landfills and how do these compare with other exposure sources?<br>2c. Evaluate if PFAS sequestered within the waste management system (e.g., landfills composting) and, if so, where it is commonly being sequestered. | 2a. Evaluate the potential trade-offs associated with environmental impacts, policy and practice related to different end of life pathways.<br><br>2b. Evaluation of the environmental impacts and associated trade-offs from different vehicle fuel types and collection vehicle operational practices and their associated impact on emissions. |
| 3. Impact of waste management activities, including how they related to broader emissions in manufacturing/re-manufacturing<br><br>3a. Evaluation of emissions reduction strategies and associated avoided emissions that can be attributed to sustainable waste management practices. | 3. Best practices/effective management strategies during waste collection and disposal | 3. Understanding barriers/benefits experienced across the value chain (e.g., end market, recycled content needs) |

Submitted pre-proposals **must relate to sustainable solid waste management practices and at least one of our 3 key Priorities.** The Priorities are of equal importance and proposals will not be rated more strongly for one Priority area over another. Subtopics listed within each priority are of particular interest to EREF. Submittals must also meet EREF's definition of solid waste as noted at the end of this RFP.

**Definition of Solid Waste Used in this RFP**
EREF defines solid waste to include:

- municipal solid waste (e.g., residential, commercial, institutional)
- construction & demolition debris
- certain industrial wastes (e.g., exploration & production waste, coal ash, batteries)
- drilling/fracking waste (e.g., oil/gas waste)
- renewable energy infrastructure (e.g., solar panels, wind turbines) and
- other wastes typically managed by the solid waste industry or generated by the public not included in the above items (e.g., electronic waste, disaster debris, etc.).

This definition does NOT include:

- agricultural wastes (that aren't handled by the waste industry),
- mining wastes managed by the mining industry (e.g., tailings),
- nuclear waste, and

- land applied wastewater treatment sludge.

Topics that do not fit the above definition and are not related to one of the three priority areas will not be considered. Topics that will not be considered include:

- Development of new life-cycle/process models to evaluate solid waste (use or evaluation of existing models is acceptable),
- Evaluating specific applications of pyrolysis/gasification to manage niche/minor waste streams,
- Development of specific gasification/pyrolysis techniques or technologies,
- Using algae to create biofuels from waste,
- Projects focused on agricultural waste or wastewater treatment sludge,
- Projects that primarily aid in the formation or initialization of community programs (e.g., recycling programs, re-use projects, etc.), and
- Research projects with extremely narrow scope (e.g., focused on a small portion of the solid waste stream, benefit a single entity or community, or that cover a very small geographical area with no broader application/scalability).

**Pre-Proposal Process for Proposal Submission**

*All pre-proposals shall be submitted through an online application found HERE. Mailed hard copies and email submissions will not be accepted.* ***NOTE: You are being directed to a 3rd party platform called InfoReady. If you have not submitted through InfoReady before, you will need to create an account separate from the EREF website.***

Pre-proposals are REQUIRED prior to submitting a full proposal using the pre-proposal template. All pre-proposals must adhere to the criteria noted and be submitted by the established deadlines. Pre-proposals submitted in response to this RFP that do not fit within the topic areas noted will not be reviewed.