|  |
| --- |
|  |

**Title:** The project title must be brief, scientifically or technically valid, intelligible to a scientifically or technically literate reader, and suitable for use in the public press.

**Specific Aims (100-word limit).** State the specific objectives of the proposed research (e.g., test a stated hypothesis, solve a specific problem, challenge an existing paradigm, or develop new technology), providing concise and unambiguous details.

|  |
| --- |
|  |

**Mission Relevance (100-word limit).** Explain how your research addresses [EMSL’s mission](https://www.emsl.pnnl.gov/about) (and, if relevant, [ARM's mission](https://arm.gov/)) and advances the science pertinent to DOE’s Biological and Environmental Research program, and describe the value/impact of its economic or societal importance.

|  |
| --- |
|  |

**Approach or Work Plan (300-word limit).** Briefly describe the work to be conducted at EMSL (and, if relevant, with ARM). Provide a sample description (including unique characteristics such as transgenic biological material, dilute solution, environmental samples containing contaminants, etc.), approximate sample numbers, any pertinent experimental groups or sampling time points, and the types of analyses to be performed at EMSL. Provide a short description of planned data analyses relevant for the proposed work, indicating which aspects would require EMSL assistance. If your research includes computation, describe what EMSL capabilities and expertise you will need, and how those capabilities complement your own.

|  |
| --- |
|  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Goal of Analysis** | **Requested Resources** | **Sample Type** | **Estimated Sample Number** | **Check if you want assistance with statistical design or analysis?** |
| Identification of 13C labeled metabolites | Liquid state NMR | soil | 15 |[x]
|       |       | Choose one.If other: specify |       |[ ]
|       |       | Choose one.If other: specify |       |[ ]
|       |       | Choose one.If other: specify |       |[ ]
|       |       | Choose one.If other: specify |       |[ ]
|       |       | Choose one.If other: specify |       |[ ]
|       |       | Choose one.If other: specify |       |[ ]

**EMSL Samples and Resources.** Fill out the table below with a high-level overview of the samples you intend to analyze at EMSL throughout the duration of your project. For EMSL’s purposes, a sample is any material intended to be analyzed or used with EMSL resources. You will have the ability to add/remove resources during final proposal submission.

**Suggested Reviewers (optional).** Proposers may include a list of reviewers who they believe are especially well qualified to review the proposal and who are not recent collaborators/coauthors.

|  |
| --- |
| **Suggested Reviewers** |
| **Reviewer Name**  | **Institution** | **Email Address** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**MONet Soil Function Request Form.** Required for Large-Scale Research proposals requesting to leverage MONet resources. MONet resources are only available on the Large-Scale Research call and CANNOT be requested for ARM-EMSL FICUS or Exploratory Research proposals.

MONet PART 1: COLLECTION EVENT CHARACTERISTICS

1. **How many sample sets\* are you requesting? (Maximum of 9)**

*\*One sample set consists of two 30 cm deep cores for biogeochemical and physical measurements as well as four 10 cm deep cores to capture surface soil heterogeneity.*

|  |
| --- |
|  |

1. **Are your sites water saturated to a depth of 30 cm?** *Soils with overlying water will not be processed.*

|  |
| --- |
|  |

1. **What environments/conditions are you comparing?**

|  |
| --- |
|  |

1. **When are you able to sample?** Please indicate the full range of weeks/months possible. Sampling must happen between Sunday to Wednesday.

|  |
| --- |
|  |

1. **Are you planning to sample at multiple sites?** If **YES**, please indicate the approximate distance between sampling sites.

|  |
| --- |
|  |

1. **Are you planning to sample the same site over time?** If **YES**, please describe the planned sampling frequency and sampling dates.

|  |
| --- |
|  |

MONet PART 2: FIELD SITE CHARACTERISTICS

* + Field site characteristics must be filled out for each sample set. Your proposal will be rejected if the latitude, longitude of all sample sets is exactly the same, unless a justification is provided in the Approach or Work Plan.
	+ Small scope proposals are limited to sampling in one US state.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample Set #** | **Latitude, Longitude** **(decimal degree notation to 4 decimal places)** | **General Location (county, nearest town & state)** | **Landowner or Manager (e.g., BLM, USDA)** | **Soil Taxonomy** | **Ecoregion**[Ecoregion map](https://www.neonscience.org/sites/default/files/styles/max_1300x1300/public/2021-04/2021_04_Graphic_Domain_Map%20Field%20sites_w_rivers_png.png?itok=0_oMxQB8) (Source: NEON) | **Land Use/Cover Type** | **Land Management****(treatments, amendments, etc.)** | **Complementary Data (description and linked URL)** |
| **Example:****1** | 46.3486,-119.2777 | Richland, WA | Pacific Northwest National Lab | Aridisol | Pacific Northwest | Urban, Developed | Elevated temperature and CO2 (40 °C and 500 ppm CO2) | Soil microstructural and ion data ([link here](https://zenodo.org/communities/emsl-monet?q=&l=list&p=1&s=10&sort=newest)) |
| **1** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |
| **2** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |
| **3** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |
| **4** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |
| **5** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |
| **6** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |
| **7** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |
| **8** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |
| **9** |       |       |       | Choose an item. | Choose an item. | Choose an item. |       |       |

MONet PART 3: COMPLIANCE REQUIREMENTS

* For each landowner or manager, paste a copy of your access agreements (required).
* An access agreement needs to be either a copy of a permit or a formal letter from the landowner explicitly authorizing collection of cores for MONet. Your proposal will be rejected if access agreements are not pasted below.