



Wednesday, December 15, 2021

Michelle Mack
Regents' Professor
Department of Biological Sciences
PO Box 5620
Flagstaff, AZ 86011

Subject: Rough Order of Magnitude (ROM) estimate in support of "Bonanza Creek Long-Term Ecological Research Renewal Proposal"

Dear Michelle,

Thank you for contacting the Battelle Arctic Research Operations (Battelle ARO) team to request proposal support for your intended submission to NSF's Arctic Research Opportunities solicitation. Battelle ARO provides the following estimate of scope and logistics cost in support of your proposal "Bonanza Creek Long-Term Ecological Research Renewal Proposal".

If your proposal is recommended for funding, your funding program is responsible for all of the costs in this estimate. The Section for Arctic Sciences (ARC) provides funding for arctic logistics in proposals outside of ARC if there is scientific interest in the proposal. NSF program managers make these decisions and co-funding arrangements within NSF. We suggest you specifically bring your proposal to the attention of Dr. Frank Rack (frack@nsf.gov) to ensure co-review by the ARC.

After reviewing the preliminary logistics request you have provided, Battelle ARO expects to support your request for the following:

- *Air support, helicopter charter*
- *Safety/communications equipment*
- *Arctic Field Training*

We expect your grant(s) would handle all other logistics including the following items:

- *Ticketed air travel*
- *Lodging*
- *Truck rental & fuel*
- *Field food*
- *Permitting*

We understand the timeline of your support would be as follows:

- *2023 field start*
- *6 years of Battelle ARO support (2023 – 2028)*

Please note the following assumptions, risks, constraints, and other factors contributing to the ROM estimate:

- *This estimate assumes use of an R44 helicopter based out of Fairbanks for day trips into the field. If a Fairbanks based helicopter is unavailable and a helicopter needs to be mobilize to Fairbanks, costs will increase.*
- *Battelle ARO support is contingent on securing all proper permits for fieldwork. While*



Battelle ARO can provide advice and contact information, permitting is the responsibility of the research team.

Based on the information you have provided us, we estimate your project is a category 6 or \$750,000 to \$1,000,000 including all field seasons.

If your proposal is awarded and we are asked to support you, we look forward to working with you to refine your field plan and to develop a detailed Life of Project budget that NSF will approve at the time of the award.

Best regards,

A handwritten signature in black ink, appearing to read "Lindsay Cameron".

Lindsay Cameron, PMP
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