

Glimpses of the Pasts: Castle Creek (Washakie Wilderness, Shoshone National Forest) 2024 Inventory

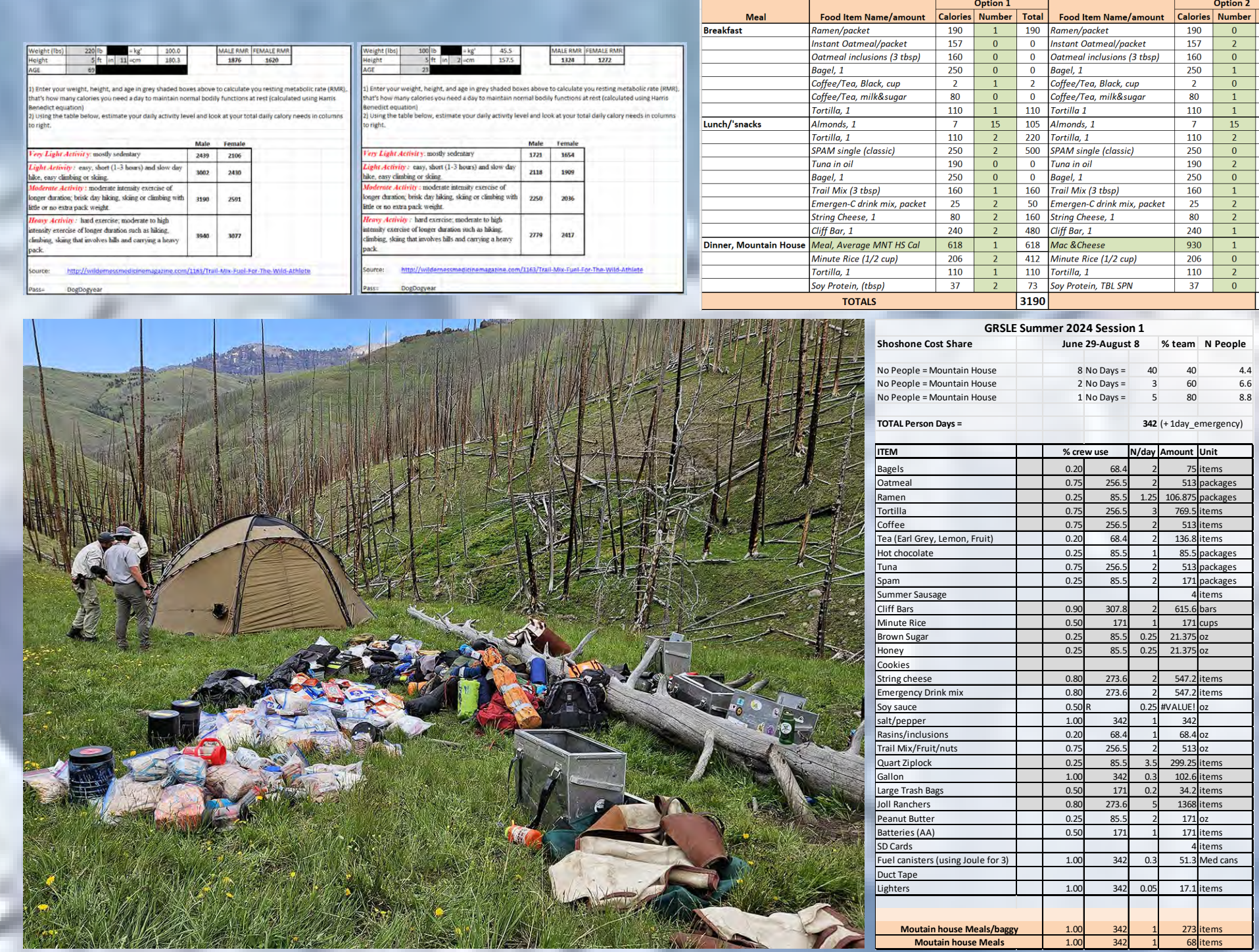


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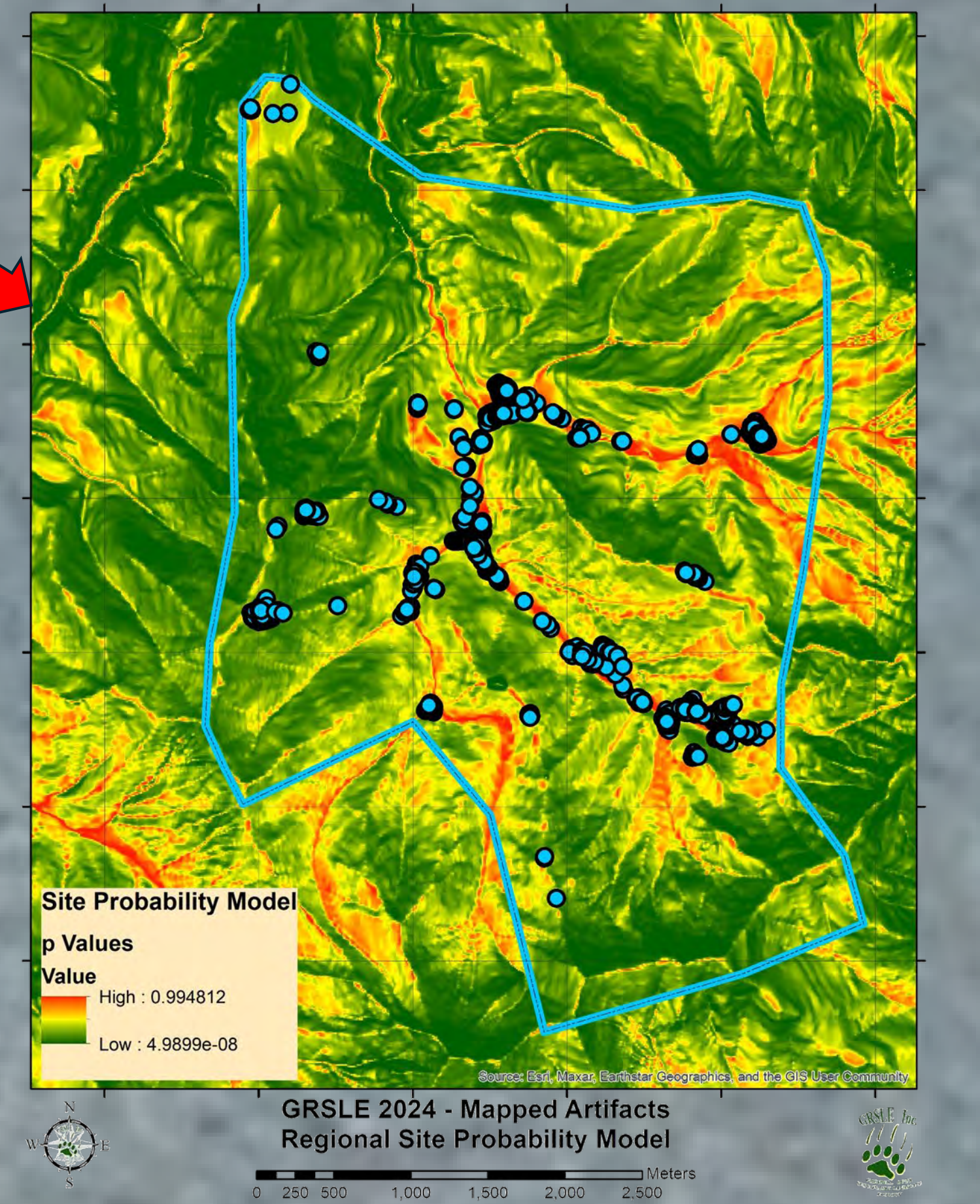
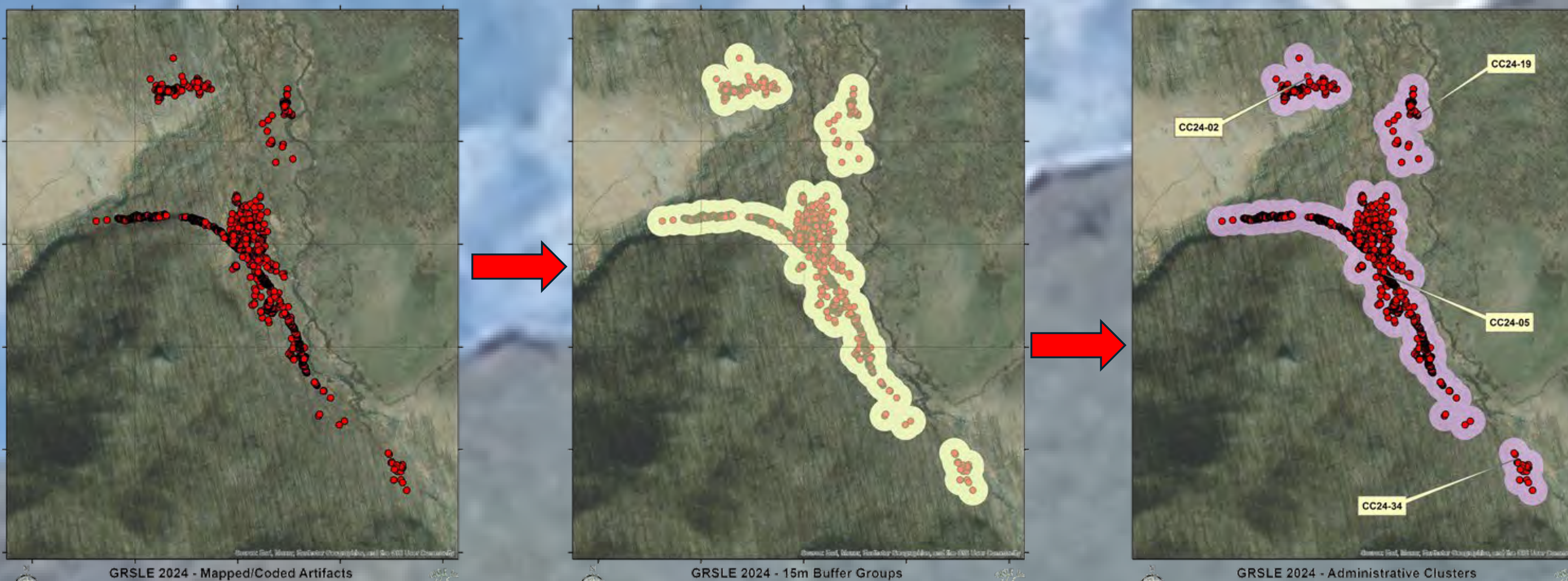
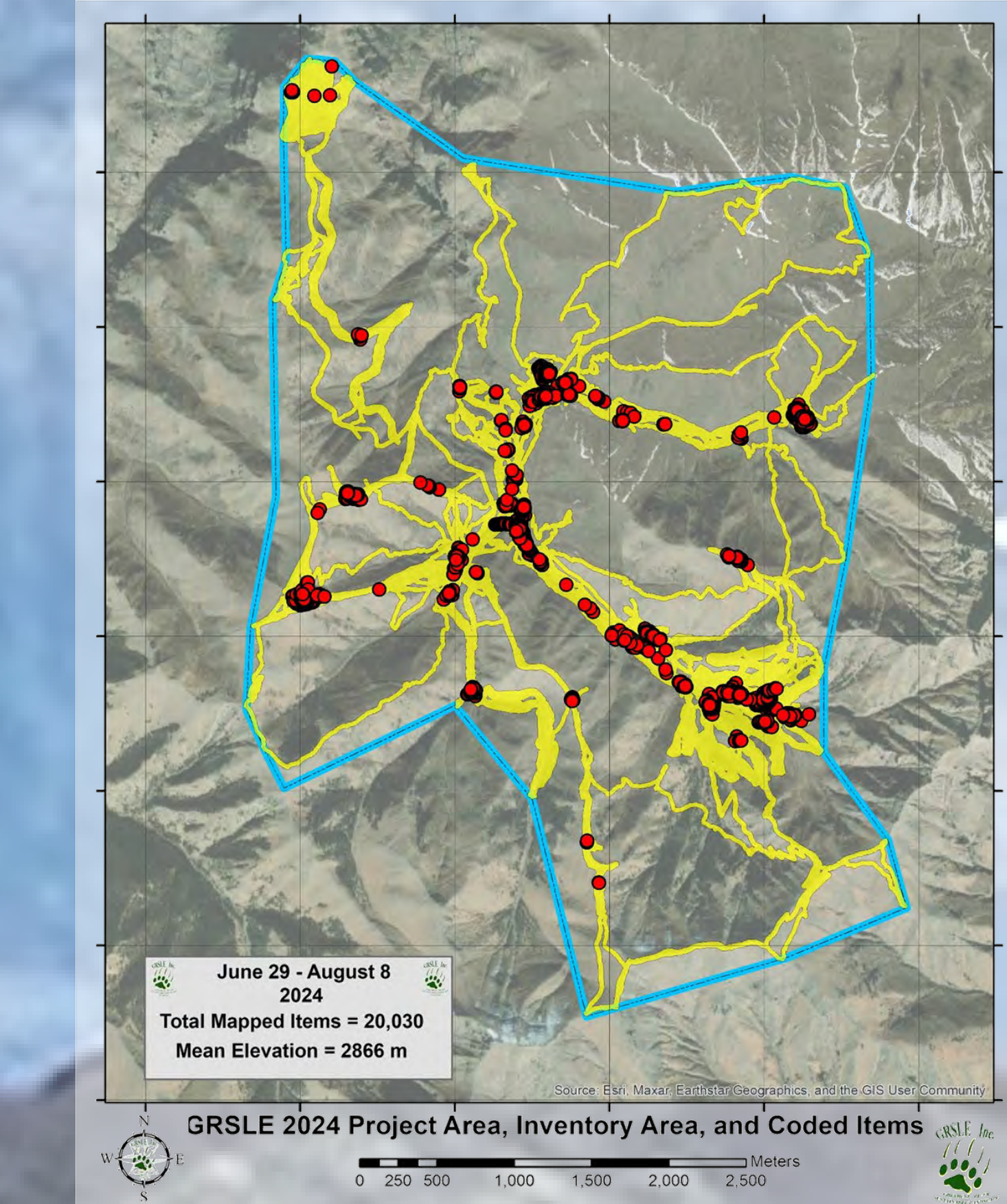
ABSTRACT

In 2024 during a single field session from 29 June until 8 August, the Greybull River Sustainable Landscape Ecology (GRSLE) project conducted a high-elevation (2600-3300m) inventory covering 412 hectares within the Washakie Wilderness (Shoshone National Forest, Wyoming) along the Castle Creek drainage. During this inventory, 19,474 prehistoric chipped stone artifacts (including temporally diagnostic projectile points [N=43; Paleoindian to Late Archaic], tools, and debitage) were documented, with diagnostic projectile points ranging from the Late Paleoindian to the Late Prehistoric/Contact period. In addition to basic archaeological in-field data collection, the project addressed several other research topics, including the impacts of wildland fire on long-term archaeological visibility, rodent burrow assessment, local versus exotic lithic raw material acquisition and utilization, cultural resource damage and protection in wilderness settings, and the bio-geo-eco-chemical study of contemporary elk migration corridors. These research topics will be integrated into the broader goal of developing improved methods for investigating the complex issues of regional landscape taphonomy, archaeological probability modeling, and refining techniques to better understand past human land-use dynamics.

For the past several field seasons, the GRSLE Project has operated a single, approximately 40-day work session in a designated Wilderness area, with no resupply. In 2024, this meant being packed into the project area on June 29 (as shown in the photo to the left) and packed out on August 8. While discussions of research design are common, the logistics of such specialized field activities are not typical day-to-day archaeological practice. A crucial component of the 40-day session is ensuring the ability to provide sufficient daily caloric intake for each team member. The guiding principle: "food is fuel." The photos to the right illustrate this planning process in action.



Fieldwork includes both systematic inventory for artifact discovery and intensive documentation of every artifact observed. The majority of each day's work (photos to the left) is comprised of two-person coding teams recording up to 300-500 artifacts and features per team (once the basic skills are acquired). In addition to the focused data recording, each crew member also has GPS locational data collected for much of the time (in future years this will shift to full time) that is used to document areas inventoried and inventory intensity. The images on the right illustrate each crew member's aggregated tracklog data for the complete field session and how the merged/buffered set of these are used to define the inventory area and inventory intensity. While these inventory area polygons are not the normal, nice and neat rectangles, they provide a much more accurate record of areas examined.



Documentation in the GRSLE project is artifact-based rather than site-based. One of the project's core principles is that while both "sites" and landscapes are crucial archaeological concepts, they don't always align well with the arbitrary definitions used in site management processes. For instance, in Wyoming, the SHPO defines a prehistoric site as "15 or more artifacts within a 30-meter radius." While this definition sometimes captures behaviorally meaningful groupings, it often might not – this is an analytical question not a definitional answer. To address this, we've adopted a GIS-based approach to clustering piece-plotted artifacts to fit the SHPO's site definition as shown in the series of images above. However, recognizing that these clusters may or may not be behaviorally relevant, and given that we seldom use them in our analyses, we refer to them as "administrative clusters" rather than "sites."

An ongoing aspect of the GRSLE project is the evaluation and re-working of a regional prehistoric archaeological probability model. Early models, such as shown in reference to artifacts recorded in 2024 were based on the locations of "administrative clusters." The most recent iteration of the probability model is now based on artifact-based rather than cluster-based data. 2024 data have not yet been incorporated into an updated probability model.

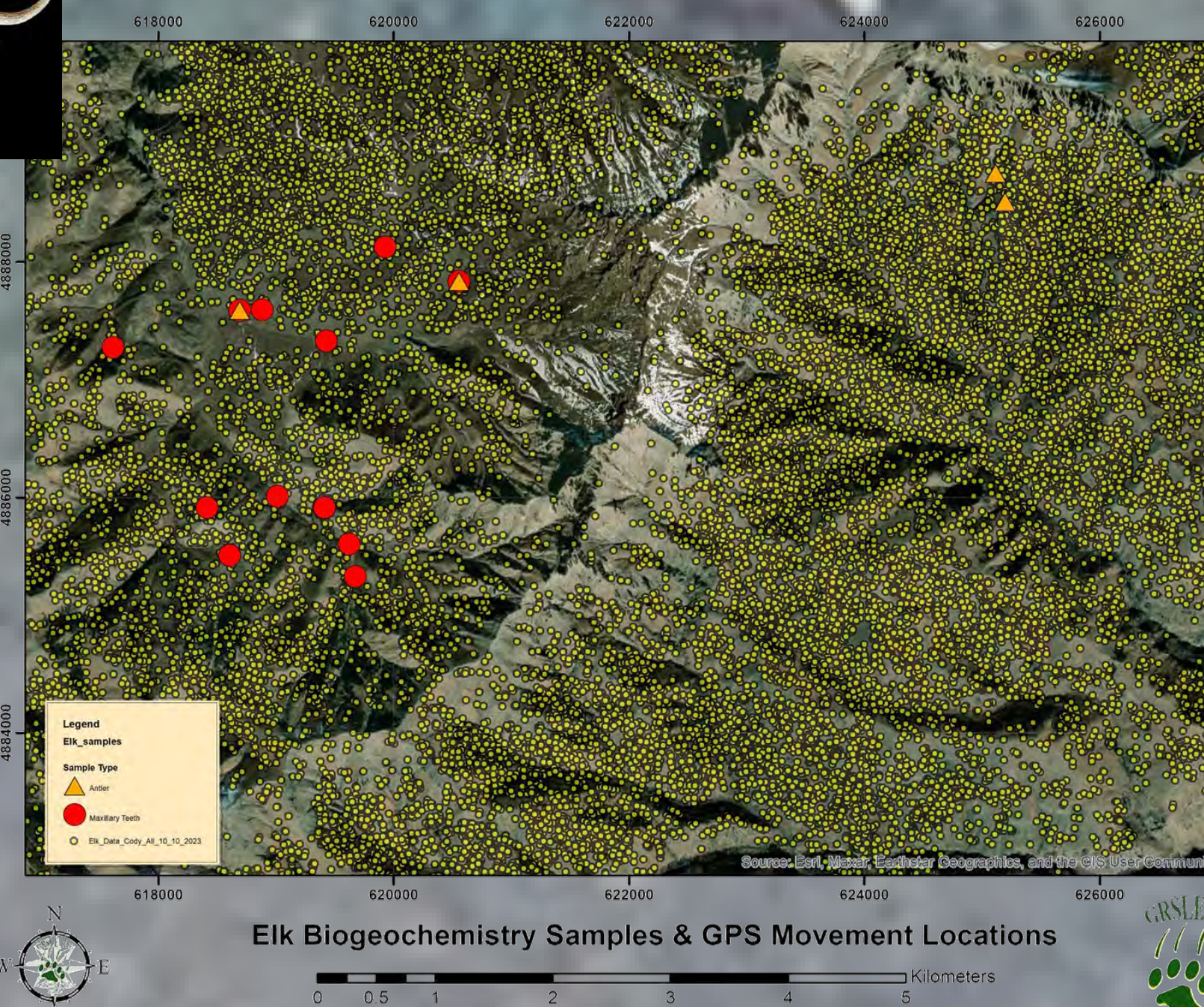
ACKNOWLEDGEMENTS

Work in 2024 was undertaken as part of a co-operative agreement with the Shoshone National Forest and special thanks go to Kyle Wright. Once again Livingston Outfitting did an exceptional job getting us packing and out safely and efficiently. Becky Thomas provided a range of support for the team before, during, and after fieldwork. A hopefully this-year-only acknowledgement goes to the Garmin InReach SOS option, the Park County Search and Rescue, and the great staff at St. Vincent's Emergency Room in Billings, Montana.

The GRSLE Project is entirely volunteer-driven. Each of the student co-authors of this poster not only had the courage to respond to our recruitment efforts, but also demonstrated such dedication to learning that they've initiated their own research projects. These projects will be presented at the 2025 (SAA) conference in Denver.



GRSLE emphasizes "archaeology in the community"—viewing past and present humans as integral components of the broader ecological community. Since 2015, one focus has been exploring the relationships between archaeological data and information about the landscape use of other species, such as GPS collar tracking of local elk herds during their annual migrations. In 2024, we expanded this work by collecting elk remains for biogeochemical research, examining the osteological records to better understand these well-documented migration behaviors.



Volunteer Opportunity of a Lifetime: Mountain Archaeology 2025

- Long field hours (and all your gear is GPS tracked!)
- No hot water or showers
- Long, steep, and rocky trails
- High altitude (10,000 ft)
- Remote and isolated
- High elevation with limited oxygen
- Short seasonal window (June-August) with limited weather
- No resupply or cache (everything you need is in the truck)
- Good weather (no rain, no snow)
- No pay (but you get to see some amazing views)
- Long days (10-12 hours)
- Wild, rugged, and rocky terrain
- Leave no trace (LNT) principles
- Site visitation and research
- Biological field research (including mammal and bird collection)
- Specialties: the Shoshone National Forest is a "Wilderness" area
- Wilderness, scientific, and historical research
- Amazing high-altitude archaeology
- If this sounds like something you'd like to spend 30-40 days sometime in June, July, & August, 2025 and you'd like more information/application forms, please contact Larry Todd (lctodd@grsle.org) or Daniel Dalmas (daldmas@grsle.org)

<http://grslearchaeology.org/>

GRSLE 2024 Field Season Submissions to 2025 SAA

GRSLE is seeking submissions for the 2025 Society for American Archaeology (SAA) conference. Submissions should include:

- Abstracts (max 200 words)
- Field notes (max 1000 words)
- Photographs (max 10)
- Maps (max 1)
- Artifacts (max 5)

Submit by: [Date]