

Long-term Surface Archaeology and Regional Data Collection: GRSLE Project 2002-2024

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ABSTRACT

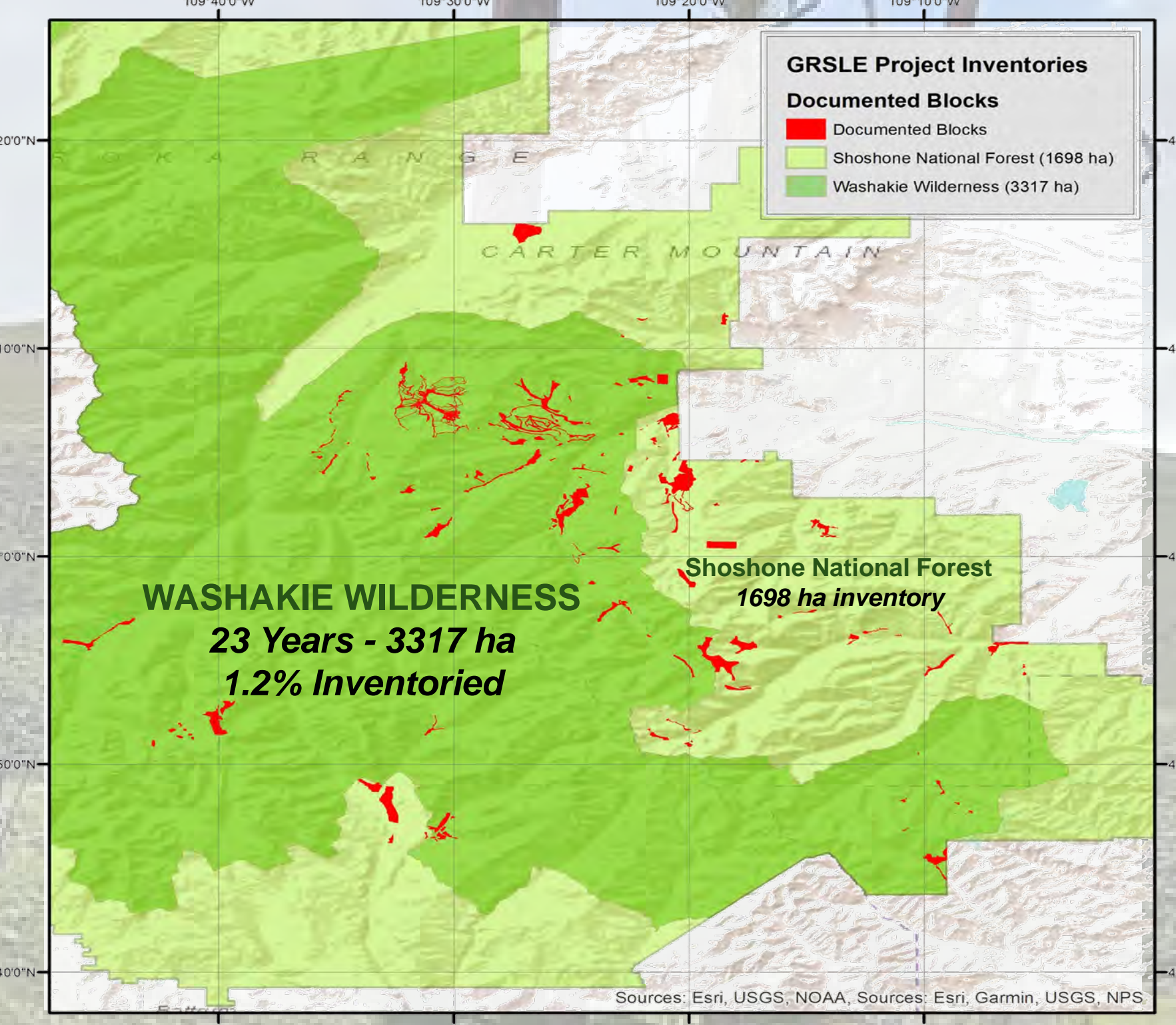
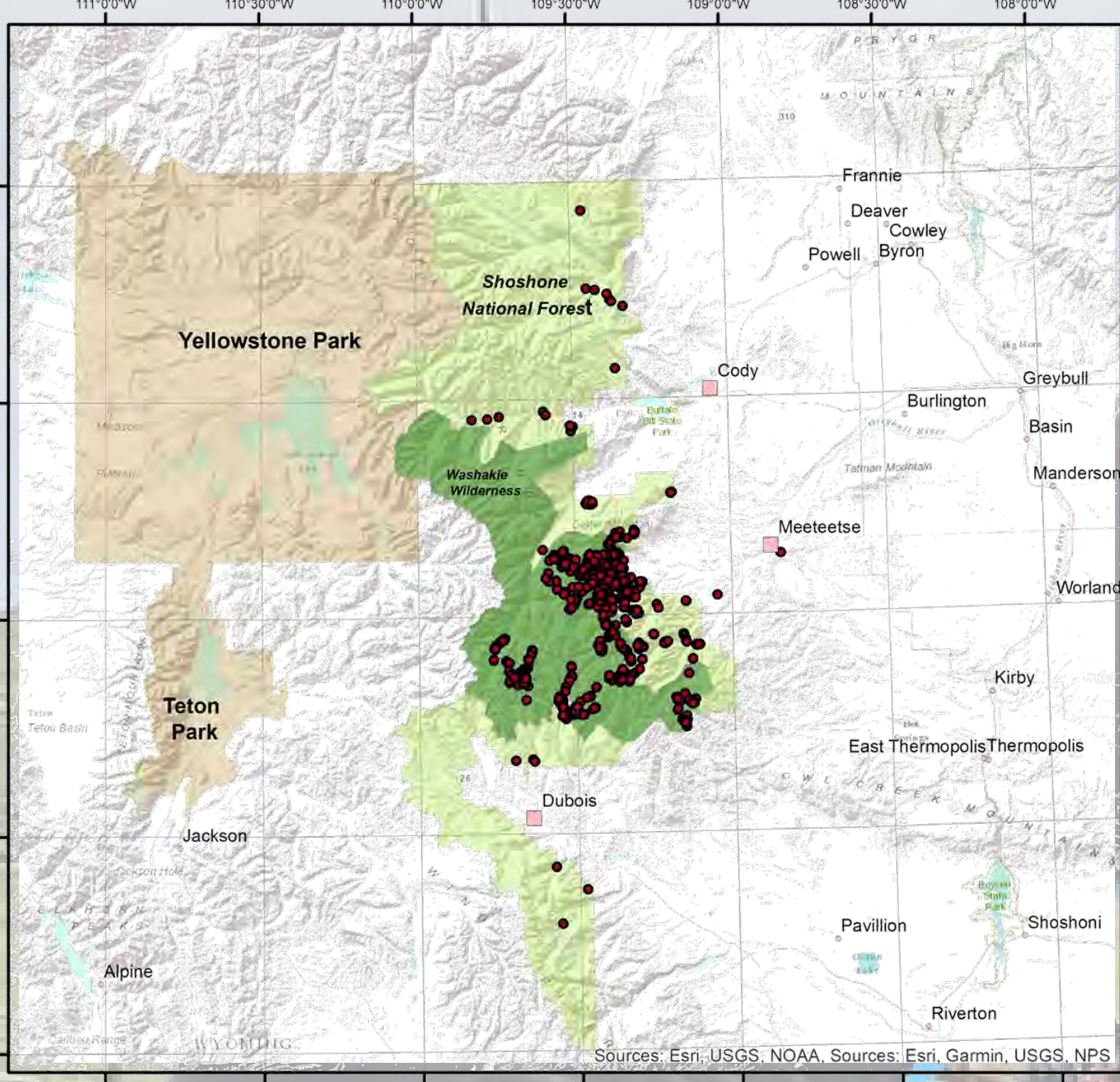
Archaeological inventories vary widely in spatial scale, ranging from small plots to larger blocks or linear projects often associated with Cultural Resource Management (CRM) undertakings. Since 2002, the Greybull River Sustainable Landscape Ecology (GRSLE) project has conducted an integrated surface inventory program focused on higher elevations (>2500m) in the Greater Yellowstone Ecosystem (GYE) in northwestern Wyoming. From its inception, the project has emphasized artifact-based, rather than site-based, documentation. This involves in-field locational and descriptive recording of each prehistoric artifact or feature using a primarily non-collection protocol, combined into a single cumulative database. Primarily working within the Shoshone National Forest, the project has now recorded 263,099 individual artifacts, grouped into 865 “administrative clusters” (i.e., “sites”), over a combined inventory area of 5015 hectares (12,392 ac). This presentation will cover the goals, methods, and basic results of GRSLE, emphasizing the benefits of long-term, longitudinal, transdisciplinary data collection for developing methods to investigate regional archaeological patterning.

Let's talk about:

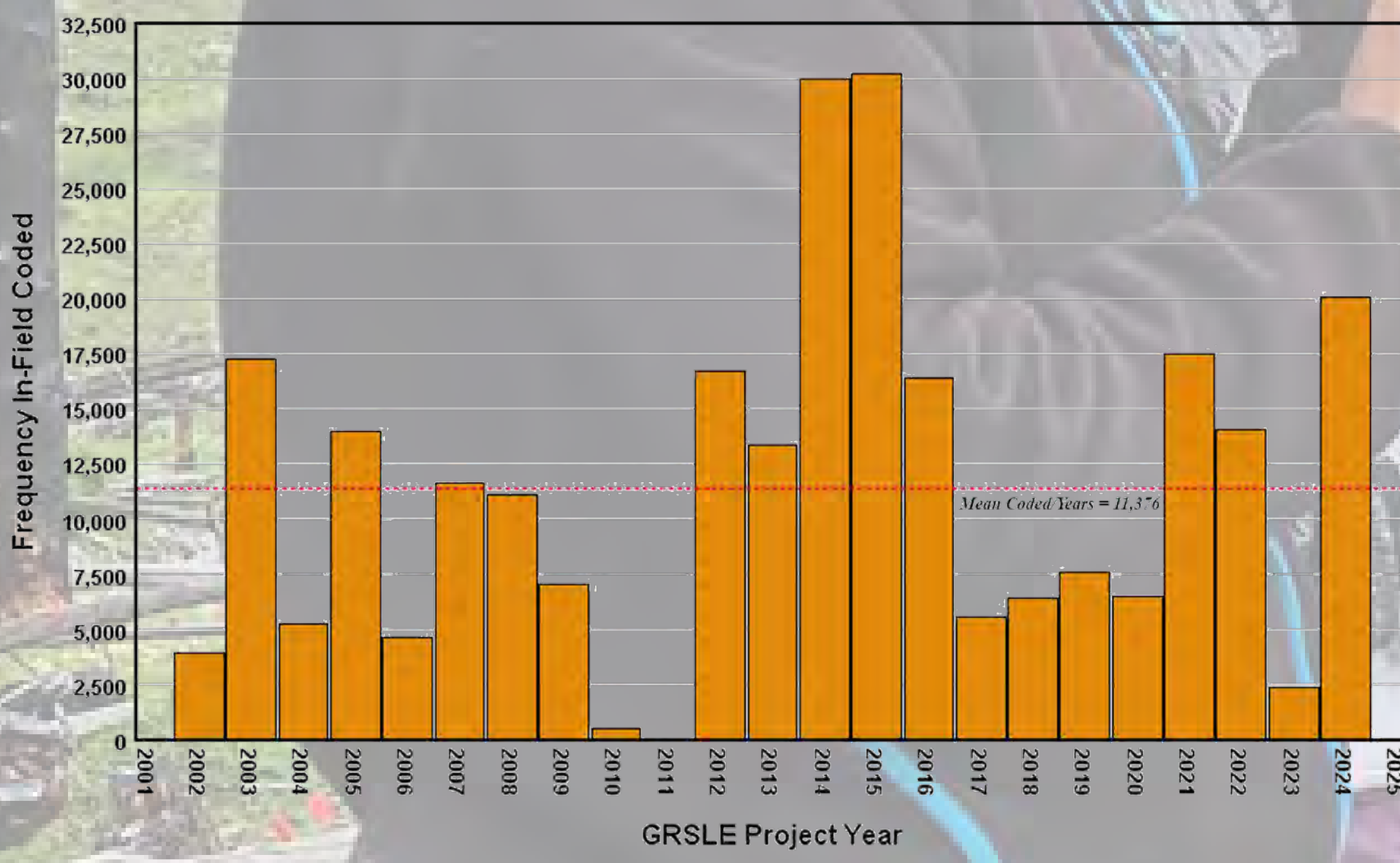
Regional, long-term, systematic, non-site data assembly.

For the past 23 years, the GRSLE project has conducted annual fieldwork in the remote, high-elevation backcountry of NW Wyoming's Shoshone National Forest. This work primarily involves surface inventories, but also includes limited testing and analysis of existing collections. This poster highlights a few key regional patterns identified thus far and explores the *exciting potential of a non-site-based research approach, which focuses on landscapes rather than isolated archaeological sites*. This poster is considered an avenue to spark discussion rather than present conclusions and here are some starting points:

- **A substantial artifact database:** The project has documented over a quarter of a million artifacts—an uncommon feat in high-elevation archaeological research.
- **“Catch and release” methods:** Most artifacts are not collected, which, while presenting some limitations, opens up new research opportunities through in situ analysis and alternative documentation methods (e.g., pre-post fire artifact visibility, or survey method comparisons).
- **Extensive survey coverage:** Over 5000 hectares (about 19 square miles), including 3317 hectares in designated Wilderness areas, have been systematically surveyed. Before this project, only a single prehistoric site was recorded in the area. Surveys were conducted with transect spacings of 5 meters or less, at a slow pace of 1 km per hour to maximize detection.
- **Environmental changes:** Dramatic alterations to the landscape—caused by large, intense fires, melting ice patches, and flooding—have added both complexity and opportunity to research priorities.
- **Focus on individual artifacts:** The project's approach emphasizes individual artifact analysis, allowing for research at multiple spatial scales and offering insights into broader regional patterns.
- **Integrating human behavior with ecological systems:** Investigations are aimed at incorporating human behaviors into the understanding of landscape dynamics and regional ecological systems, offering a more holistic perspective on past human-environment interactions (for example ungulate migrations).

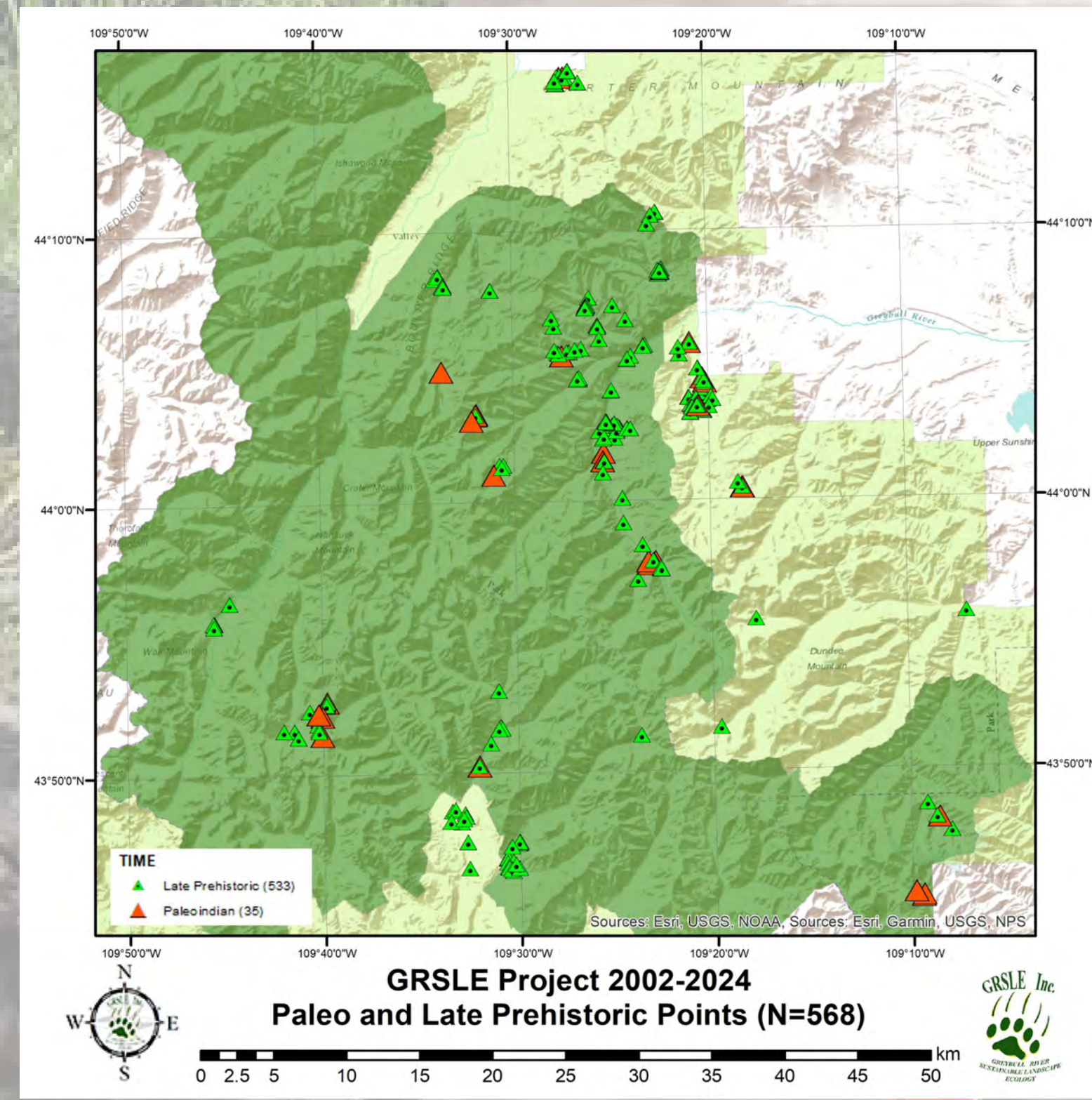
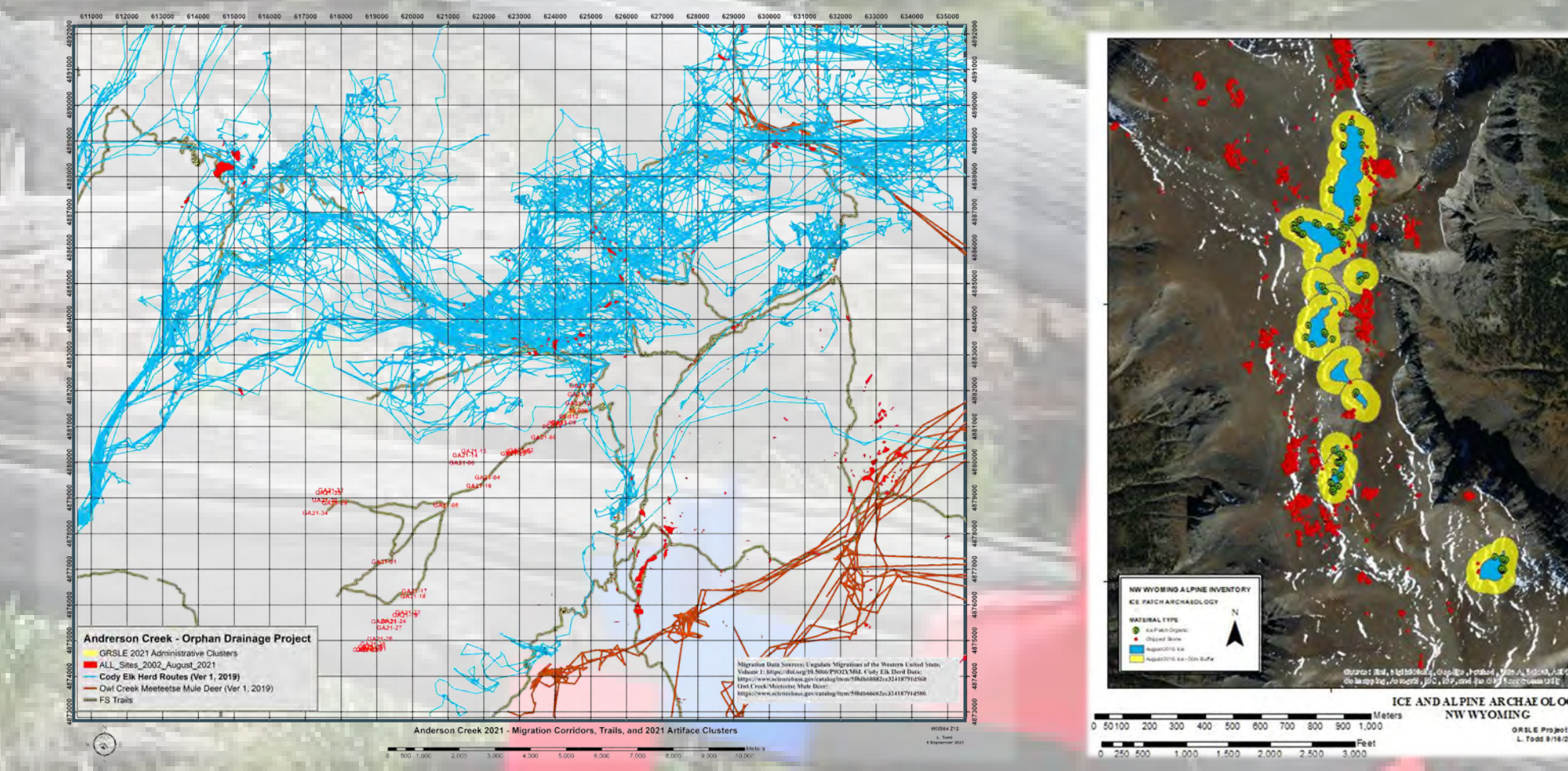
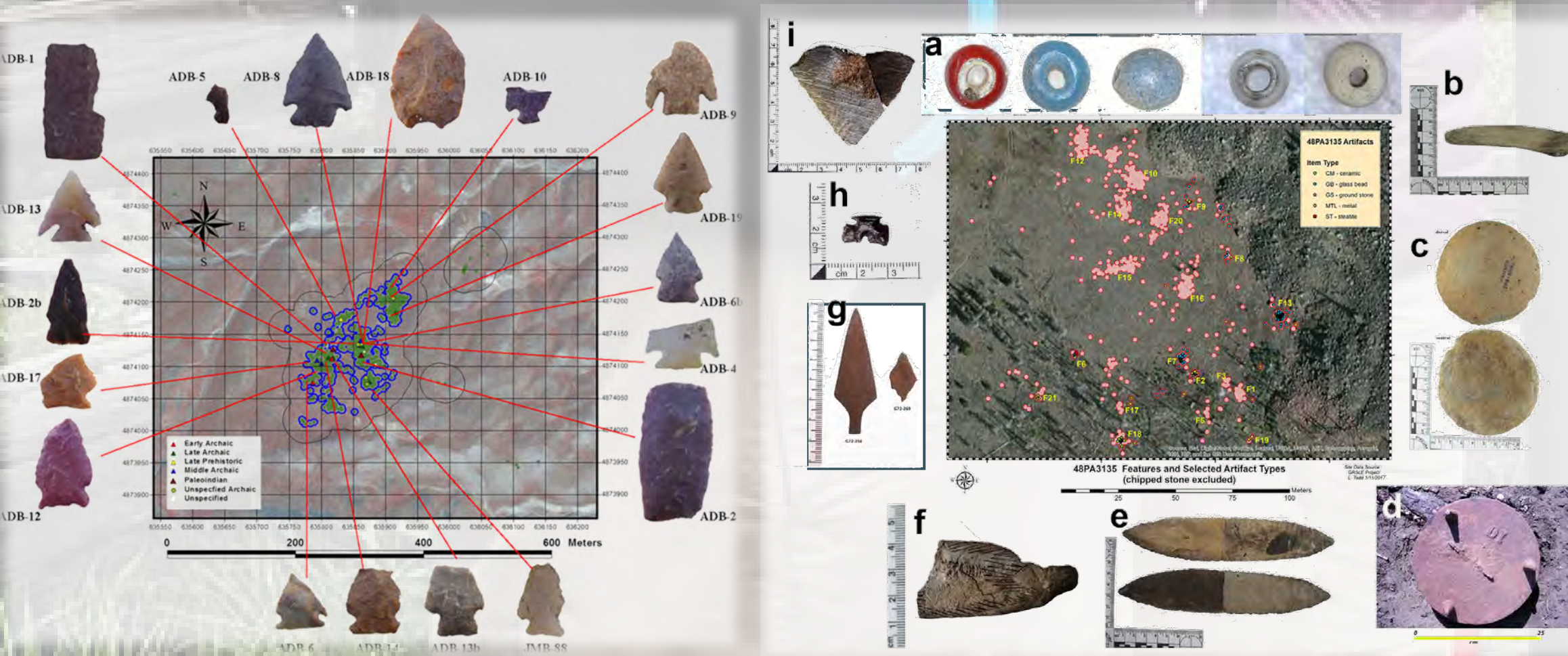


GRSLE Project 2002-2024
Artifact-Based Documentation (N=263,100)



TIME	Chronological Type	N	Elevation (m)	
			Mean	Std. Deviation
Late Prehistoric (LP)	768	2592.31	343.04	
Late Archaic (LA)	430	2676.94	379.56	
Middle Archaic (MA)	192	2296.25	479.54	
Early Archaic (EA)	108	2522.90	538.99	
Paleoindian (PI)	75	2589.99	526.35	

Paleo Morphology	Temporally Indicative Projectile Points				TOTAL	
	Local Material	Other Non-Local	Other Non-Local	Other Non-Local		
Late Prehistoric (LP)	350	208	180	242	421	559
Late Archaic (LA)	112	26	33	26	209	481
Middle Archaic (MA)	121	42	38	11	184	284
Early Archaic (EA)	30	22	2	18	77	109
Paleoindian (PI)	33	26	2	47	109	205
TOTAL	656	224	243	248	950	1359



23 years of consistently recorded artifact data in a single, 58 variable database. Total of 263,099 items documented (total of 15,259,742 observations/cells).

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