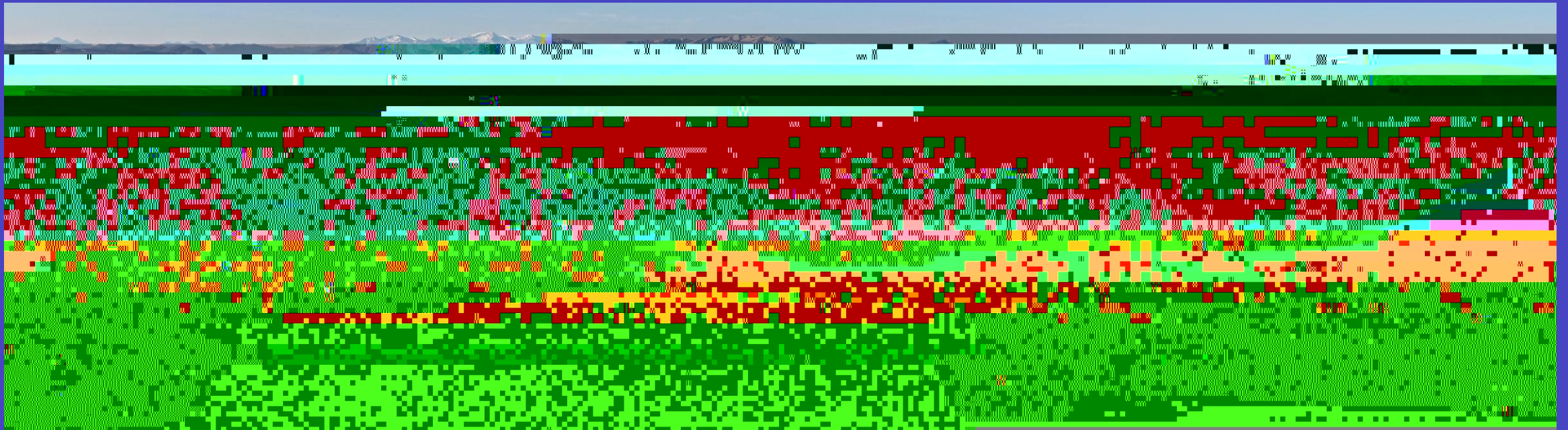


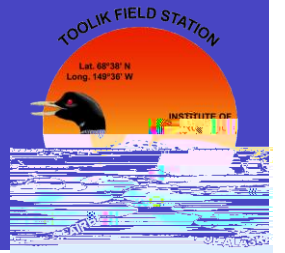
TOOLIK GIS REPORT

OCT 1, 2020 - SEPT 30, 2021

RANDY FULWEBER



OVERVIEW



Staffing

Requests Fulfilled

Website Usage & Metrics

STAFFING

We are in the process of hiring a GIS Analyst/ Field Technician.

During the summer, the Analyst will serve as the GIS field office coordinator.

The Analyst will be responsible for coordinating and completing field data collection requests.

During the winter, the Analyst will work out of the Fairbanks GIS office.

Randy Fulweber will move into the GIS & RS Manager position.

Randy will supervise the Analyst and any GIS summer technicians/interns.

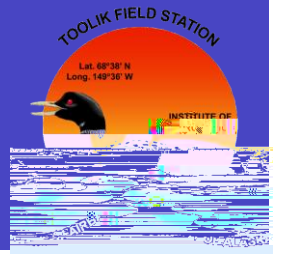
Randy will provide peak-season support to GIS field team

Randy will continue to report to Amanda Young.

We hope/expect Jorge Noguera can return as our main summer technician (his 14th summer!).



PROJECT SUPPORT SNAPSHOT



Provided support to 50 research groups, PIs, students

Site Selection support for 18 projects

UAS flights and processing for 17 projects

GPS surveys for 11 projects

Publication support for 1 project

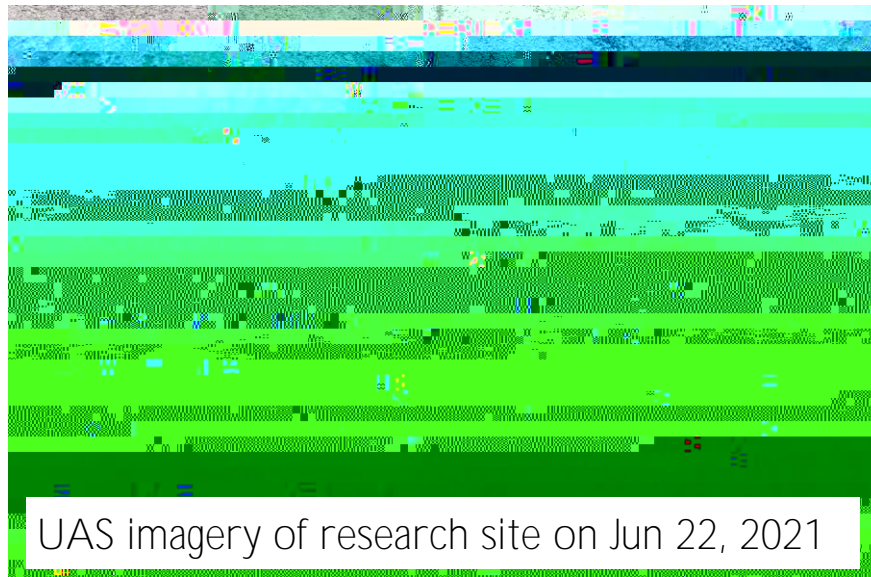
PROJECT SUPPORT: RUSTY WATERS

16 UAS flights during the summer

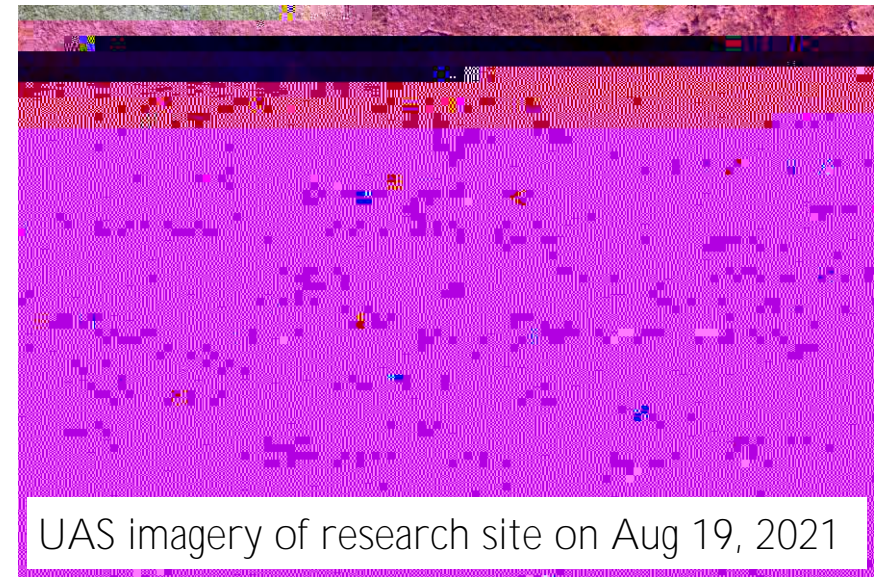
3 GNSS high accuracy field surveys

2^o research goal: Autodetect the presence of iron (red) in UAS imagery and differentiate it from other red colored features in the imagery.

Co-authorship for Rowan McPherson, GIS Technician, for her UAS and GNSS survey data collection and processing contributions.



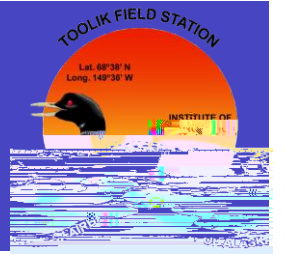
UAS imagery of research site on Jun 22, 2021



UAS imagery of research site on Aug 19, 2021



FUTURE DRONE PLATFORM?



A few drone requests the past couple of years have been made. Our current fleet of propeller-driven drones are good for small plot areas, like the LTER plots (0.15ha), but our fleet can not safely and efficiently complete large area requests.

VTOL (Vertical Take Off and Landing) fixed-wing drones are particularly suitable for large area requests around Toolik.

Leading candidate: WingtraOne:

<https://wingtra.com/mapping-drone-wingtraone/>

Can accommodate

