



Water Permit

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To: Robert Hunter <robert.hunter@nwb-oen.ca>

Cc: Licensing Department <licensing@nwb-oen.ca>, Ben Stanley <bstanley@marssociety.org>

Hey Robert. Here is our English-language description of this year's project. Jeannie is doing our translation and will have it to me very soon.

Also, I'll call you here in a few hours if you're around to pay the permitting fee.

English Project Description

The Flashline Mars Arctic Research Station (FMARS) is a long-running Arctic research facility located on Talluruti / Devon Island, Nunavut, near the Houghton Impact Crater. The 2026 field season will continue the environmental, astrobiological, and operational research program conducted during previous FMARS missions. The work will remain low-impact and non-invasive, with activities focused on environmental monitoring, surface observation, small surface sampling where permitted, and continued engagement with Nunavut organizations and the Resolute Bay community.

The 2026 project will continue monitoring water quality, radiation exposure, permafrost conditions, surface hydrology, habitat air quality, and biological/environmental indicators in the area surrounding FMARS. Water and snowmelt samples may be collected from nearby streams, meltwater channels, and permafrost runoff areas to assess pH, conductivity, microbial presence, particulate load, and possible nanoplastic contamination. Passive and active radiation monitoring will continue inside and outside the habitat. Field observations will also document seasonal changes in soil stability, drainage, and visible biological communities such as algae, lichens, cyanobacteria, and microbial mats.

The 2026 season will also add or continue two limited activities: drone mapping of the Houghton crater area and initial low-impact assessment of the gossan area. Drone flights will be conducted only where safe, permitted, and consistent with QIA and wildlife restrictions. The gossan work will be limited to visual observation, geotagging, photographs, and small surface samples only where authorized. No excavation, drilling, trenching, or destructive land disturbance is proposed under this application.

The purpose of the research is to build a year-to-year environmental record for a sensitive High Arctic Mars analog site. The data will support climate monitoring, environmental stewardship, field safety, and future research planning in Nunavut. The work also supports planetary science and space exploration research by helping scientists understand how crews operate safely and responsibly in isolated, cold, dry, and remote environments.

The 2026 team includes Commander Trevor Jahn, XO/Health and Safety Officer Dr. Laura Thomas, Science Officer Anderson Wilder, and Mission Specialists Dr. Lisa Rand, Adrian Oberland, and Tasha Coelho. The Mars Society will ensure that all team members are briefed on QIA land-use terms, wildlife protection, fuel handling, archaeological and palaeontological site avoidance, water protection, and reporting requirements before beginning field activities.

No human-subject research involving Nunavut community members is proposed. Community engagement will remain focused on respectful communication, sharing project goals and findings, listening to local observations, and supporting transparency with the Hamlet of Resolute Bay, QIA,

NRI, and other relevant Nunavut authorities.

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Map for Water Permit.jpg
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