Demande de la CNER faisant l'objet d'un examen préalable #125727
3BM-REP2126 Municipal Water Licence Amendment and Renewal

Type de demande :	New
Type de projet:	Municipal and Industrial Development
Date de la demande :	7/1/2022 1:19:14 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Autorisations proposées:	from 0001-01-01 to 0001-01-01
Promoteur du projet:	Kayla Clouter Government of Nunavut PO Box 1000 Stn 700 Iqaluit Nunavut X0A0H0 Canada Téléphone :: 867-975-5476, Télécopieur ::

DÉTAILS

Description non technique de la proposition de projet

Anglais: The Government of Nunavut Department of Community and Government Services (CGS), on behalf of the Hamlet of Naujaat, is applying for the construction of a single cell lagoon located adjacent the current wastewater disposal site, and amendment of the discharge effluent limits in the existing water licence to effectively service the growing population in Naujaat until the design horizon of 2043. The treatment facility will be designed with a new upstream primary lagoon cell that is impermeable. The existing downstream natural depression that is acting as the current lagoon will become a secondary treatment cell, and the existing downstream wetland-treatment-area (WTA) will remain in use. Seasonal effluent pump out to the secondary cell and WTA is to occur late in the summer season to allow spring freshet to pass and to allow the wetland to recharge to promote its ability to support effluent biodegradation. The requested amendment to the effluent limits within the WTA is based on the most comprehensive research completed to date on lagoon-wetland systems in Nunavut, and considers the significant change to the hydrologic regime that will be influenced by the seasonal pump out of the future impermeable lagoon that will replace the passive exfiltration and dilution that occurs now. CGS retained Dillon Consulting Limited to develop the Pre-Design Report for the upgrade of the current sewage facility in the Hamlet of Naujaat. This study projected the flow and loadings based on the population growth, proposed the treated effluent goals and standards, reviewed and selected the most suitable location and treatment technologies, sized the lagoon system, and developed a conceptual schematic design. The treatment goals for the lagoon-wetland effluent criteria, at the end of the treatment process, were established as 100, 120, and 1.25 mg/L for carbonaceous biochemical oxygen demand, total suspended solids, and un-ionized ammonia as nitrogen, respectively, to protect the final receiving environment. These effluent criteria are based on 6 years of research completed by the Centre for Water Resources Studies at Dalhousie University directly in Naujaat and across Nunavut. Given an estimated population of 1,225 residents in 2021 by Statistics Canada, the design population to be serviced by the expanded lagoon was projected to be 2,175 people in 2043. This population will require an active storage volume 121,469 m3 for 12 months of storage. The lagoon discharge point will be by controlled manual pump out into the secondary lagoon that will then exfiltrate into the WTA which will remain at the same location. The decant system will be designed with a flowrate below 2500 m3/day to ensure effluent has sufficient residency time in the WTA.

Français: Au nom du hameau de Naujaat, le ministère des Services communautaires et gouvernementaux (SCG) du gouvernement du Nunavut présente une demande de construction d’une lagune à bassin unique située à côté du site actuel d’évacuation des eaux usées et la modification des limites de l’effluent de rejet du permis d’utilisation de l’eau existant afin de desservir efficacement la population croissante de Naujaat jusqu’à la date de conception prévue, en 2043. La nouvelle installation de traitement comportera un nouveau bassin de lagune principal en amont, lequel sera imperméable. La dépression naturelle en aval faisant actuellement office de lagune deviendra un bassin de traitement secondaire et l’aire de traitement du milieu humide en aval demeurera en service. Le pompage saisonnier de l’effluent vers le bassin secondaire et l’aire de traitement du milieu humide doit avoir lieu à la fin de l’été pour permettre à la crue printanière de passer et à la zone humide de se remplir afin de favoriser sa capacité à soutenir la biodégradation de l’effluent. La modification demandée aux limites de l’effluent dans l’aire de traitement du milieu humide se fonde sur les recherches portant sur la structure des lagunes et du milieu humide au Nunavut les plus complètes à ce jour, et tient compte des changements importants au régime hydrologique, qui sera influencé par le pompage saisonnier de la future lagune imperméable devant remplacer l’exfiltration et la dilution passives actuelles. SCG a retenu les services de Dillon Consulting Limited pour rédiger le rapport de préconception sur la modernisation de l’installation d’égout actuelle dans le hameau de Naujaat. Cette étude a permis de projeter le débit et les charges en fonction de la croissance démographique, de proposer des objectifs et des normes en matière d’effluents traités, d’examiner et de choisir l’emplacement et les technologies de traitement les plus appropriés, de dimensionner le système de lagune et d’élaborer un schéma conceptuel. Les objectifs de traitement de l’effluent lagune-milieu humide, à la fin du processus de traitement, ont été établis à 100, 120 et 1,25 mg/L pour la demande biochimique en oxygène des matières carbonées, le total des solides en suspension et l’ammoniac non ionisé sous forme d’azote, respectivement, dans le but de protéger l’environnement récepteur final. Ces critères relatifs aux effluents sont fondés sur six années de recherches effectuées par le Centre for Water Resources Studies de l’Université Dalhousie, directement à Naujaat et dans tout le Nunavut. En tenant compte de la population estimée à 1 225 résidents en 2021 par Statistique Canada, des projections ont permis d’établir la population à desservir par la lagune agrandie à 2 175 personnes en 2043. Cette population nécessitera un volume de stockage actif de 121 469 m³ pour 12 mois de stockage. Le point de décharge de la lagune se fera par pompage manuel contrôlé dans la seconde lagune, qui s’exfiltrera ensuite dans l’aire de traitement du milieu humide, lequel demeurera au même emplacement. Le débit du système de décantation sera établi à une valeur inférieure à 2 500 m³/jour pour garantir à l’effluent un temps de repos suffisant dans l’aire de traitement du milieu humide.

Inuktitut: ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᓐᓂ ᓄᓇᓕᖕᓂ ᒐᕙᒪᒃᑯᓐᓂᓪᓗ ᐱᔨᑦᑎᕋᖅᑎᒃᑯᑦ, ᑭᒡᒐᖅᑐᖅᓱᒋᑦ Hᐋᒻᒪᓚᒃᑯᑦ ᓇᐅᔮᓂ, ᐱᓇᔪᖕᒪᑕ ᓴᓇᔭᐅᓂᐊᖅᑎᓪᓗᒍ ᐊᑕᐅᓯᑐᐊᖅ ᐃᓗᑦᑐᖅᑎᓯᒪᔪᖅ ᑭᓈᓗᖅᑲᖅᕕᒃ ᐃᓂᖅᑲᖅᑐᖅ ᒫᓇ ᐃᒪᖅᒧᑦ ᓴᓗᒻᒪᖅᓴᐃᕕᐅᑉ

ᖃᓂᒋᔮᓂ, ᐋᖅᑭᒋᐊᖅᑕᐅᓂᖓᓗ ᑯᕕᖅᑕᖅᑕᐅᒋᐊᓕᖕᒧᑦ ᑭᒡᓕᖃᔭᓐᓂᖓᓄᑦ ᐱᑕᖃᖅᐸᕇᖅᑐᒥᒃ ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯᖓᓐᓄᑦ ᐱᔨᑦᑎᕋᕈᑎᒋᑦᑎᐊᕐᓂᐊᕐᓗᒍ ᐃᓄᒋᐊᒃᓯᕙᓪᓕᐊᑐᐃᓐᓇᖅᑐᓄᑦ ᓇᐅᔮᕐᒥᐅᓄᑦ ᑭᓯᐊᓂ ᐋᖅᑭᒃᓯᒪᓂᒃᓴᖓᓄᑦ ᑎᑭᐅᑎᓐᓂᖅᐸᑕ 2043-ᒧᑦ ᑎᑭᑦᑐᒍ. ᑭᓈᓗᖃᕐᕕᒃ ᐋᖅᑭᒃᑕᐅᓯᒪᓂᐊᖅᐳᖅ ᑰᒡᓗᓂ ᖁᒻᒧᙵᖅ ᑭᓈᓗᖃᕐᕕᓪᓗᐊᑕᕐᒧᑦ ᐃᔅᓴᔭᙱᑦᑐᒧᑦ. ᑰᒃᐸᕇᖅᑐᖅ ᐊᒻᒧᑦ ᓄᓇᒥᙵᖅᑐᖅ ᐃᑎᖅᓴᓕᐊᖕᒍᓯᒪᔪᖅ ᒫᓐᓇ ᑭᓈᓗᖃᕐᕕᒥᔭᐅᕙᖅ ᐊᐃᑉᐸᕆᔭᐅᑐᓂ ᑭᓈᓗᖃᕐᕕᒥᔭᐅᓂᐊᖅᐳᖅ, ᐊᒻᒧᑦᑐ ᑰᒃᑐᖅ ᐃᒪᖅᓱᖕᒧᑦ ᑰᒃᐸᑦᓚᐊᔪᖅ ᐊᑐᖅᑕᐅᖏᓐᓇᕐᓂᐊᖅᓱᓂ. ᐊᕐᕌᒎᑉ ᐃᓚᖓᒍᑦ ᑯᕕᖅᑕᖅᑕᐅᕙᒃᑐᖅ ᒥᓪᓗᐊᖅᑕᐅᑎᓪᓗᒍ ᐊᐃᑉᐸᖓᓄᑦ ᑭᓈᓗᖃᕐᕕᖕᒧᑦ ᐊᒻᒪ ᐃᒪᕐᒧᑦ ᓴᓗᒻᒪᖅᓴᐃᕕᖕᒧᑦ ᐱᓕᕆᐊᖑᓛᖅᑐᑦ ᐊᐅᔭᖅ ᐊᒃᐸᖅᑎᑦᑐᒍ ᐅᐱᕐᖓᒃᑯᑦ ᑕᑕᓗᐊᕈᑎᓃᑦ ᖃᖏᐅᑎᓗᑎᒃ ᓯᓚᑖᒍᑦ ᑯᒪᖅᐸᓪᓚᐊᓚᕐᓗᓂ ᐃᒪᖅᑰᓂᕐᒍᑦ ᓴᙱᒃᑎᒥᐊᕐᓗᒍ ᐅᔾᔨᕆᔭᐅᓕᖅᑎᑦᑐᒍ ᐃᑲᔪᖅᑐᐃᔪᓐᓇᕐᓂᖓ ᒥᓪᓗᐊᖅᑕᐅᔪᒧᑦ. ᑐᒃᓯᕋᐅᑕᐅᓯᒪᔪᖅ ᐋᖅᑭᒋᐊᖅᑕᐅᖁᓪᓗᒍ ᐃᑭᐊᖓᒍᑦ ᓯᓚᒻᒧᑦ ᑯᕕᕚᓪᓕᐊᔪᑦ ᐃᒪᕐᒍᑦ ᓴᓗᒻᒪᖅᓴᐃᕕᖕᒥ ᑐᙵᕕᖃᖅᐳᖅ ᐊᑕᖏᖅᑕᐅᓪᓗᑎᒃ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᐱᐊᓂᒃᑕᐅᓯᒪᔪᓄᑦ ᒫᓐᓇᒍᑦ ᑎᑭᓪᓗᒍ ᑭᓈᓗᖃᕐᕕᖕᒥ–ᐃᒪᖅᑰᓂᕐᒧᑦ ᐱᓕᕆᐊᖑᓯᓐᓄᑦ ᓄᓇᕗᒻᒥ, ᐃᓯᒪᒥᔭᐅᓗᓂᓗ ᐅᔾᔨᕐᓇᖅᑐᖅ ᐊᓯᔾᔨᖅᑐᒧᑦ ᐃᒪᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕆᔭᐅᔪᒧᑦ ᐊᐅᔭᐅᓖᖕᒪᑦ ᒥᓪᓗᐊᖅᑕᐅᕙᒡᓗᓂ ᓯᕗᓂᒃᓴᑦᑎᓐᓂ ᐅᔾᓯᒃᑐᒧᑦ ᑭᓈᓗᖃᕐᕕᖕᒧᑦ ᐃᓇᖕᒥᐅᑎᓂᐊᖅᑐᒍ ᓄᓇᐅᑉ ᐃᑭᐊᖅᒍᓚᑦ ᑭᓂᖅᑎᑦᑐᒍ. ᓄᓇᓕᖕᓂ ᒪᕙᒪᒃᑯᓐᓂᑦᑐ ᐱᔨᑦᑎᕋᖅᑎᒃᑯᑦ ᐃᓂᒃᓴᓚᐅᖅᑎᑦᑎᓚᐅᖅᐳᑦ Dillon Consulting Limited-ᑯᓐᓄᑦ ᐱᕙᓪᓕᐊᑎᑕᐅᖁᓪᓗᒍ ᐋᖅᑭᒃᓯᒪᐸᕇᖅᑐᖅ ᐅᓂᒃᑳᒥᒃ ᐱᔾᔪᑎᒋᓪᓗᒍ ᓄᑖᙳᕆᐊᖅᑕᐅᓂᖓ ᒫᓐᓇ ᑭᓈᓗᖃᕐᕕᖕᒥ ᓇᐅᔮᓂ Hᐋᒻᒪᓚᒃᑯᓐᓂ. ᖃᐅᔨᓴᖅᑕᐅᔪᖅ ᓇᓚᐅᑦᑖᕈᑕᓚᐅᖅᐳᖅ ᐃᖕᒥᖅᖁᓂᕆᔭᖕᒪᓂᒃ ᑯᕕᖅᑕᐸᐅᖅᑲᑦᑕᖅᓂᖕᒪᓂᓪᓗ ᑐᙵᕕᒋᔭᐅᓪᓗᑎᒃ ᐃᓄᒋᐊᒃᓯᕙᓪᓕᐊᓂᖕᒥᑦ, ᑐᒃᓯᕋᐅᑎᖃᓚᐅᖅᒪᑦ ᑲᒪᒋᔭᐅᔪᓂᒃ ᒥᓪᓗᐊᖅᑕᐅᔾᔪᑎᓄᑦ ᑐᕌᒐᕐᒥᓄᑦ ᒪᓕᒃᑕᐅᕙᒃᑐᓄᓪᓗ, ᕿᒥᕐᕈᔭᐅᓯᒪᔪᑦ ᓂᕈᐊᖅᑕᐅᓯᒪᔪᑦᑐ ᐊᑲᐅᓪᓚᕆᑦ ᐃᓂᒋᔭᐅᔪᓐᓇᖅᑐᑦ ᑲᒪᕕᐅᕙᐱᐅᔪᓐᓇᖅᑐᑦᑐ ᖃᕆᑕᐅᔭᓕᕆᔾᔪᑎᓄᑦ, ᐱᓕᕆᐊᖑᓯᒪᔪᑦ ᑕᖕᒥᓕᖕᓄᑦ ᓄᓇᒥ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᓄᑦ ᐊᐸᑎᒥᓪᓗ ᑲᒪᒋᔭᐅᔾᔪᑎᓄᑦ, ᐊᖕᒥᓂᖕᒪ ᑭᓈᓗᖃᕐᕕᒃ ᐱᓕᕆᐊᖑᓪᓗᓂᓗ ᑕᖕᒥᓕᖕᓄᑦ ᐋᖅᑭᒃᓯᒪᓂᕆᓴᖕᒪᑦ. ᑭᓈᓗᖃᕐᕕᐅᑉ ᖃᓂᒋᔮᓂ ᐃᒪᖅᑰᓂᖅ ᒥᓪᓗᐊᖅᑕᐅᓂᐊᖅᑐᓄᑦ 100, 120, ᐊᒻᒪ 1.25 mg/L ᐸᐅᒃᓴᕐᒧᑦ ᐊᓂᕐᓂᖅᓴᖅᑐᒥᒃ ᐱᔭᕆᐊᖅᓯᓐᓂᖓ ᓄᖑᑎᕆᐊᓕᐊᓂᖓᓄᑦ, ᑲᑎᙵᒥᑦ ᓄᖅᑲᖅᑎᑕᐅᓯᒪᔪᑦ ᑕᖅᑭᓃᑦ, ᐊᒻᒪ ᐊᐸᑎᒍᑦ ᓱᑭᕐᓇᖅᑐᑦ ᐳᓚᖅᑲᖅᓂᖓᓄᑦ, ᑕᐃᒫᒃ ᒪᓕᒡᓗᑎᒃ, ᓴᐳᑎᒍᒥᑦ ᑭᖑᓪᓕᖅᐹᒥ ᑯᕕᐅᕕᐅᕙᓪᓕᐊᔪᖅ ᐊᐸᑎᑦᑎᓐᓂᑦᑐᖅ. ᑰᖕᓂᖓᓄᑦ ᒪᓕᒋᐊᓖᑦ ᑐᙵᕕᖃᖅᐳᑦ ᐅᑭᐅᓄᑦ ᐊᖅᕕᓂᓕᖓᓄᑦ ᖃᐅᔨᓴᖅᑕᐅᕐᓂᒃᓯᒪᔪᓄᑦ ᐃᒪᑦᑎᐊᐸᖕᒥ ᖃᐅᔨᓴᖅᑎᒃᑯᓂ Dalhousie ᓯᓚᑦᑐᖅᓴᕐᕕᐊᓗᐊᕐᒥ ᓇᐅᔮᓂᑦᑐᑦ ᐊᒻᒪ ᓄᓇᕗᓕᒦᒥ. ᐃᓄᖕᒥᑦ ᐱᔾᔪᑎᖃᖅᑕᐅᒥᐊᓕᑦ ᐅᐃᒍᔭᐅᓯᒪᓕᖅᑎᑦᑐᒍ ᑭᓈᓗᖃᕐᕕᒃ ᓇᓚᐅᑦᑖᖅᑕᐅᓚᐅᖅᓯᒪᕗᖅ 1,225-ᖑᓂᕐᒥᓐᓂᒃ ᓄᓇᖅᑲᑎᒌᑦ 2021–ᖑᑎᑦᑐᒍ ᑭᒡᓕᓯᓂᐊᖅᑎᒃᑯᑦ ᑲᓇᑕᒥ, ᐃᓄᖕᒥᑦ ᐱᔾᔪᑎᖃᖅᑕᐅᒥᐊᓕᑦ ᐅᐃᒍᔭᐅᓯᒪᓕᖅᑎᑦᑐᒍ ᑭᓈᓗᖃᕐᕕᒃ ᓇᓚᐅᑦᑖᖅᑕᐅᓚᐅᖅᓯᒪᕗᖅ ᐃᓄᒋᐊᒃᓯᓈᕿᓯᒥᔭᐅᓪᓗᓂ 2,175–ᓂᒃ 2043–ᖑᓕᖅᐸᑦ. ᐅᑯᐊ ᐃᓄᐃᑦ ᐱᔭᕆᐊᖃᕐᓂᐊᖅᑐᑦ ᐆᒻᒪᕆᒃᑐᓂᒃ ᐃᒻᒥᖅᑎᒥᔪᓐᓇᖅᑐᒥᒃ 121,469 m3 ᑕᖅᑭᓄᑦ 12-ᓄᑦ ᐃᒻᒥᖅᓯᖅᑎᒥᔪᓐᓇᖅᑐᒥᒃ. ᑭᓈᓗᖃᕐᕕᒃ ᑰᒻᐱᖕᒪᑦ ᐃᓯᐊ ᐊᒻᒪᖕᒍᑦ ᐊᐅᓚᑦᑕᕆᐊᓕᖕᒍᑦ ᒥᓪᓗᐊᕈᑎᒍᑦ ᑐᒡᓕᐊᓄᑦ ᑭᓈᓗᖃᕐᕕᖕᒍᑦ ᑭᖑᓂᐊᒍᓪᓗ ᑰᓯᕆᓪᓗᓂ ᐃᒪᕐᒍᑦ ᓴᓗᒻᒪᖅᓴᐃᕕᖕᒍᑦ ᑕᐃᑲᓂ ᐃᓂᖕᒪᓃᖕᒥᕐᓇᖅᓂᐊᖅᑐᖅ. ᑯᕕᔭᐅᓂᖓ ᐃᒪᓐᓇ ᐋᖅᑭᒃᓯᒪᓂᐊᖅᓱᓂ ᑯᕕᐊᓚᐃᑎᒥᓗᓂ 2500 m3/ᐅᓪᓗᕐᒧᑦ ᓇᓗᓇᐃᖅᓯᑕᐅᓗᓂ ᑭᓈᓗᒃ ᑯᕕᔭᐅᓂᖓ ᑰᖕᒧᑦ ᐃᒫᓄᓪᓘᓐᓃᑦ ᓈᒻᒪᒃᑐᒥᒃ ᑯᕕᔪᓐᓇᕐᓗᓂ ᐃᓪᓗᒥᐅᖃᑎᒦᓄᑦ ᓈᒻᒪᒃᑐᒥᒃ ᐃᒪᕐᒍᑦ ᓴᓗᒻᒪᖅᓴᐃᕕᖕᒥ.

Personnel

Personnel on site: 3

Days on site: 365

Total Person days: 1095

Operations Phase: from 2023-07-01 to 2025-09-30

Operations Phase: from 2021-01-27 to 2031-01-26

Post-Closure Phase: from to

Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
New Single Cell Sewage Lagoon and Access Road	Waste disposal	Municipal	Naujaat currently utilizes a sewage disposal facility located 400 m from the northeast edge of the airport runway. It is located in a valley, south of the old solid waste disposal site. Sewage trucks offload from a discharge area located on the west side of the valley. Sewage collects in the valley at a natural depression which acts as a primary treatment cell, and flows approximately 1,400 m through a series of wetlands and surface water bodies before entering Hudson Bay.	None	Falls within the Naujaat Municipal Boundary

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Naujaat	Kevin Tegumiar	Hamlet of Naujaat	2022-06-16
Naujaat	Alan Robinson	Naujaat Municipal Council	2022-06-16

Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Kivalliq

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Office des eaux du Nunavut	The amendment application to the Naujaat water license will be submitted to NWB after the NIRB screening. The amendment will be for the construction of a new single cell lagoon located adjacent to the current wastewater disposal site to meet the capacity of the growing municipality and to adjust the effluent treatment limits to match what was identified in the Nunavut specific research	Not Yet Applied		

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Land	Vacuum trucks collect sewage from building holding tanks and transport it for disposal at the active lagoon.	

Project accomodation types

Collectivité

Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
Sewage Truck	2	15,000L	Sewage Trucks will discharge waste into the lagoon one at a time
Excavator	1	10x15	Berm Construction
Dump Truck	1	10x20	Transport granular material from a quarry 8-10km away from the site for lagoon fill
Pump	1	N/A	Annual decant of sewage lagoon effluent into the adjacent wetland treatment area

Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
Diesel	fuel	0	0	0	Liters	The facility itself does not use fuel. Once annually a small portable pump will be used on site to decant the effluent contained in the lagoon. The pump is then removed from the site.

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
299	No change to current water supply system under the existing license. Water is pumped directly from water source into water treatment plant through dual intakes	No change to current water supply under the existing license.

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Waste disposal	Eaux usées (matières de vidange)	121,469 m3 in 2043	Sewage truck disposes sewage into the lagoon where it is held until the annual effluent pump out into the wetland treatment area.	Treatment is provided within the lagoon and from the wetland treatment area.

Répercussions environnementales :

The new single cell lagoon will be impermeable to contain the sewage until the annual decant. The current lagoon allows uncontrolled discharge into the wetland. The new lagoon will be designed to serve the community until 2043. Construction of the new single cell lagoon will still allow for use of the existing natural depression that is acting as the current lagoon which will be used as a secondary treatment cell. The existing downstream wetland treatment area will remain in use.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

The asset will be owned and operated by the municipality for the purpose of sewage disposal and treatment.

Description de l'environnement existant : Environnement physique

The land is already zoned for waste disposal.

Description de l'environnement existant : Environnement biologique

The land is already zoned for waste disposal. The impact to the receiving environment will be improved as the current lagoon allows uncontrolled discharge into the wetland treatment area and the new lagoon will not. Treatment will be enhanced by the new infrastructure.

Description de l'environnement existant : Environnement socio-économique

The land is already zoned for waste disposal. Sewage disposal is critical for municipal operations.

Miscellaneous Project Information

This application is to amend the 3BM-REP2126 water license to include the construction of a new single cell sewage lagoon in the new license. The current lagoon is under capacity. The lagoon will be designed to hold 12 months of wastewater for a design life of 20 years, giving consideration to population growth. The wetland treatment area and discharge into the wetland treatment area will remain the same. Additionally, the licensee is requesting to change the effluent treatment parameter limits to cBOD = 100mg/L, TSS = 120 mg/L, and unionized ammonia as nitrogen = 1.25 mg/L based on the best available wastewater treatment research conducted in Nunavut. Construction activities will include blasting and excavation. All excavated materials will be hauled away, while fill for the lagoon berm will be sourced from a quarry 8-10km away from the construction site, with material that only requires screening.

Identification des répercussions et mesures d'atténuation proposées

This project is intended to improve the current wastewater treatment facility in Naujaat. The lagoon will be designed to meet the long term needs of Naujaat. The new lagoon will be impermeable to contain the sewage until annual decant; the current lagoon allows uncontrolled discharge through the wetland treatment area.

Répercussions cumulatives

This project will enhance wastewater treatment, reducing impacts on the receiving environment.

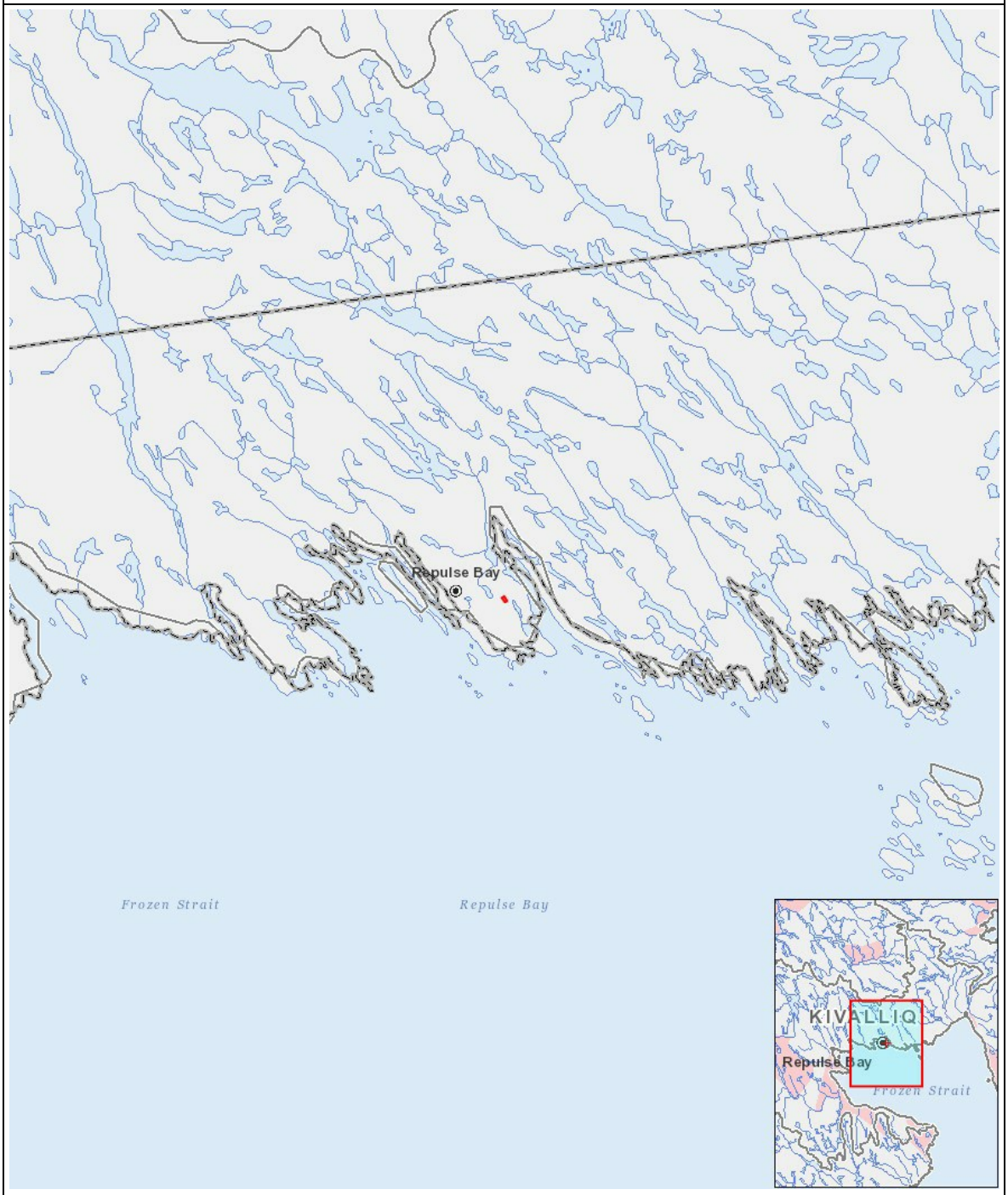
Impacts

Identification des répercussions environnementales

	PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Construction																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Exploitation																									
Waste disposal		-	-	-	-	P	-	-	-	-	-	-	-		-	-	M	P	-		-	-	-	P	P
Désaffectation																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

Site du projet



Liste des géométries de projet

1	polygon	New Single Cell Sewage Lagoon and Access Road