AGNICO EAGLE

MELIADINE GOLD MINE

Meliadine Extension Conceptual Fish Offsetting Plan

FEBRUARY 2022

ᐊᐅᓚᑦᑎᔮᓂᙳᕐᑐᑦ ᓇᐃᓈᕐᓯᐋᑦ

ᐊᒡᓃᑯᒃᑯᑦ ᐅᐃᒍᒋᐊᖅᓯᐋᒪᐋᑦ (ᑕᐃᔭᐅᐋᖅ ᑕᓯᕐᐋᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᖅ) ᓈᒻᒪᑦᓯᓂᐊᕐᓗᒍ ᑕᓯᕐᐋᐊᕐᒥᑦ ᐅᔭᕋᒃᑕᕆᐊᖅ 25 ᑭᓛᒥᑕᓪᓗᐊᓂᒃ ᐅᐊᖕᓇᖕᖓᓂᑦ ᐅᖕᖓᓯᒃᑎᑦᓯᐋᖅ ᑲᖏᖅᔫᓂᕐᒥᑦ, ᐊᒻᒪᓗ 80 ᑭᓛᒥᑕᓂᒃ ᓂᒋᖅᐸᓯᐊᓂᑦ ᐱᖕᖓᖕᓇᖅᐸᓯᐊᓂᑦ ᐅᖕᖓᓯᒃᑎᑦᓯᐋᖅ ᐃᒡᓗᓕᙳᕐᐋᖕᒥᑦ ᑭᕙᓪᓕᕐᒥᑦ ᓄᓇᕗᒻᒥᑦ. ᓄᓇᕗᒻᒥ ᐊᒃᑐᖅᓯᓂᕐᒥᑦ ᕿᒥᕐᕈᔩᒃᑯᑦ (ᐊᕙᑎᓕᕆᔩᒃᑯᑦ) ᐱᓕᕆᐊᕐᒧᑦ ᓇᓗᓇᐃᒃᑯᑕᖅ ᓈᓴᐅᑎ 006 ᑐᓂᔭᐅᓚᐅᖅᑐᖅ 2015-ᒥᑦ ᐊᒻᒪᓗ ᐊᕙᑎᒥᒃ ᖃᐅᔨᓴᐃᓂᖅ ᑕᓯᕐᐋᐊᕐᒥᑦ ᐅᔭᕋᒃᑕᕆᐊᕐᒧᑦ, ᑐᓂᔭᐅᔾᐋᑎᖃᕈᑎᖕᖓ ᐱᓕᕆᐊᕐᒧᑦ ᓇᓗᓇᐃᒃᑯᑕᕐᒥᑦ ᓈᓴᐅᑎ 006-ᒥᑦ 2015-ᒥᑦ, ᐃᓚᐅᐋᑦ ᓈᒻᒪᒋᔭᐅᓂᖕᒋᑦ ᐊᕕᒃᓯᒪᐸᓗᒋᑦ ᐱᕙᓪᓕᐊᓂᕆᔭᖕᖓᑦ, ᐃᓚᐅᐸᓗᑎᒃ ᐅᔭᕋᒃᑕᖅᑕᐅᓂᖕᖓ ᑎᑭᖓᓂᐊᕐᒥᑦ ᐱᑕᓕᒃ ᓄᓇᒥᑦ ᐅᒃᑯᐃᖕᖓᐋᒃᑯᑦ ᐊᒻᒪᓗ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᒃᑕᕐᓂᒃᑯᑦ ᐊᒻᒪᓗ ᐅᔭᕋᒃᑕᖅᑕᐅᓂᖕᒋᑦ ᐸᒻᐸ (Pump), F ᐃᓂᐅᐋᖅ (F zone), ᑎᒃᑲᕗᕆ (Discovery) ᐊᒻᒪᓗ ᐅᐊᔅᒥᐊᒡ (Wesmeg) ᐱᑖᓪᓕᑦ ᓄᓇᒥᑦ ᐅᒃᑯᐃᖕᖓᐋᒃᑯᑦ ᐊᑐᕐᓗᑎᒃ. Type A ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯ 2AM-MEL1631 ᑐᓂᔭᐅᓚᐅᖅᑐᖅ 2016-ᒥᑦ ᑎᑭᖓᓂᐊᕐᒥᑦ ᐱᑕᓕᖕᒧᑦ ᐃᓚᒋᔭᐅᐋᓄᓪᓗ ᐱᕐᑯᑎᓄᓗᐊᖅ ᐃᓚᐅᐸᓗᑎᒃ, ᐱᓕᐅᕆᕙᓪᓕᐊᕝᕕᒃ, ᓄᓇᓕᐊᓛᖅ, ᕿᒪᒃᑎᑦᑐᓄᑦ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᒃ ᐊᒻᒪᓗ ᐊᒃᑕᒍᖅᑕᐅᐋᑦ ᐅᔭᖅᖃᓂᒃ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᓄᑦ.

ᑕᓯᕐᐋᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᖅ ᐃᓚᐅᓇᔭᖅᑐᑦ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᒃᑕᕐᓂᖅ ᐊᒻᒪᓗ ᑕᕆᐅᓕᒃ ᐃᒪᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐱᕐᑯᑏᑦ ᐸᒻᐸ-ᒥᑦ (Pump), F ᐃᓂᐅᐋᒥᑦ (F zone), ᑎᒃᑲᕗᕆᒥᑦ (Discovery) ᐱᑕᓕᖕᓂᑦ, ᐱᕙᓪᓕᐊᓗᑎᒃ ᓄᓇᐅᑉ ᐃᓗᐊᓄᐊᕐᕕᖕᒥᑦ ᐊᒻᒪᓗ ᐃᓚᒋᔭᐅᐋᑦ ᐱᕐᑯᑏᑦ ᑎᑭᖓᓂᐊᕐᒥᑦ-Wolf ᖃᓂᖕᖓᓂᑦ, ᓴᓇᕙᓪᓕᐊᓂᖅ ᐊᒻᒪᓗ ᐊᐅᓛᖅᑎᑦᑎᓂᖅ ᐊᓄᕆᒥᑦ ᐆᒻᒪᖅᑯᑎᓕᐅᕈᑎᒥᑦ, ᐊᒻᒪᓗ ᐊᑐᕐᓗᑎᒃ ᐃᓗᑦᑎᖅᓯᒪᐋᓂᒃ ᐊᒻᒪᓗ ᓄᓇᐃᔭᐃᓂᕐᓂᑦ. ᓈᒻᒪᒋᔭᐅᐋᑦ ᐱᕐᑯᑎᒋᔭᐅᐋᑦ, ᓘᕐᓗ ᓄᓇᓕᐊᓛᖅ, ᓯᖃᓪᓕᑎᖓᕝᕕᒃ, ᐃᒪᕐᒥᒃ ᐊᐅᓚᑦᑎᕝᕚᑦ, ᐆᒻᒪᖅᑯᑎᓕᖓᕝᕕᒃ, ᕿᒪᒃᑎᑦᑐᓄᑦ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᒃ, ᐅᑭᐅᓗᒃᑖᖅ ᐊᐸᑯᑎ, ᐃᒪᑦᑎᐊᕙᒃᑐᕐᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐃᒪᓕᖓᕝᕚᑦ ᐊᑐᖅᑕᐅᖏᓐᓇᕐᓂᐊᖅᑐᑦ. ᐊᓯᐊᙳᖅᓯᓂᐊᖏᑦᑐᑦ ᑲᖏᖅᔫᓂᕐᑦᑐᓂᒃ ᐱᕐᑯᑎᒋᔭᐅᐋᓄᑦ. ᐊᐅᓛᕐᓂᖕᖓ ᐅᔭᕋᒃᑕᕆᐊᖅ ᐃᓚᓯᒃᑲᓐᓂᕐᓂᖃᕋᔭᖅᑐᖅ 11 ᐅᑭᐅᓂᑦ ᑎᑭᓪᓗᒍ 2043-ᒧᑦ, ᐅᒃᑯᐊᖅᐸᓪᓕᐊᓗᑎᒃ 2044-ᒥᑦ 2050-ᒧᑦ, ᐊᒻᒪᓗ ᐅᒃᑯᐊᖅᓯᒪᓕᖅᑎᓪᓗᒍ 2051-ᒥᑦ 2060-ᒧᑦ.

ᐊᑐᖅᑕᐅᖕᖍᕈᖕᓇᖅᑐᑦ ᐱᔭᐅᐋᒪᖕᒥᐋᑦ ᑕᓯᕐᐋᐊᕐᒥᑦ ᐅᐃᒍᒋᐊᖅᓯᓂᕐᒧᑦ ᐃᓚᐅᐋᑦ ᓴᓇᔭᐅᓂᖕᖓ ᐊᒻᒪᓗ ᐊᐅᓛᖅᑎᑕᐅᓂᖕᖓ ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ ᒥᑦᑕᕐᕕᒃ, ᐃᒪᕐᒧᑦ ᓱᐸᓗᓕᒃ ᑯᕕᑎᑦᑎᓂᐊᕐᓗᓂ ᑕᕆᐅᓕᒃ ᐃᒪᕐᒥᒃ ᐃᑎᕕᐊᓄᑦ, ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᓂᖕᖓ ᓄᖑᓯᒪᐋᑦ ᓄᓇᒥᑦ ᐅᒃᑯᐃᖕᖓᐋᑦ ᑐᖅᑯᖅᑕᐅᓂᐊᕐᓗᑎᒃ ᕿᒪᒃᑎᑦᑐᑦ ᐊᒻᒪᓗ ᐊᒃᑕᒍᖅᑕᐅᐋᑦ ᐅᔭᖅᖃᐃᑦ.

ᐅᐃᒍᒋᐊᖅᓯᓂᖅ ᐊᐋᕐᓇᖅᑐᒥᒃ ᐱᑦᑕᐃᓕᓂᕐᒧᑦ ᐊᓯᐊᙱᖅᑎᓂᖅᑕᖃᕐᓂᐊᖅᑐᖅ, ᐃᖁᐃᓵᓂᕐᒧᑦ, ᐅᕝᕙᓘᓐᓃᑦ ᓱᕋᐃᓂᕐᒥᒃ ᐃᖃᓗᐃᑦ ᐃᓂᒋᖃᑦᑕᖅᑕᖕᒋᓐᓂᒃ ᐱᕐᑯᑎᒋᔭᐅᐋᑦ ᐃᓂᒋᓂᐊᖅᑕᖕᒋᓐᓄᑦ, ᐊᓯᐊᙳᕐᓗᑎᒃ ᑯᕕᓂᖕᒋᑦ, ᐊᒻᒪᓗ ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ ᐊᒃᑕᑯᐃᑦ ᐃᓂᖕᒋᓐᓄᑦ ᐊᒻᒪᓗ ᐃᓚᒋᔭᐅᐋᑦ ᐊᐅᓚᑦᑎᓃᑦ ᐊᒃᑐᖅᑕᐅᓯᒪᐋᖅ ᐃᒪᕐᒥᒃ ᐊᒻᒪᓗ ᑕᕆᐅᓕᒃ ᐃᒪᕐᒥᒃ. ᐅᐃᒍᒋᐊᖅᓯᓂᖅ ᓂᕆᐅᒋᔭᐅᐋᖅ ᐃᖃᓗᐃᑦ ᐃᓂᒋᖃᑦᑕᖅᑕᖕᒋᓐᓂᒃ ᐊᓯᐅᔨᑎᑦᑎᓂᐊᕐᓂᖕᖓᓄᑦ ᑕᓯᕐᐋᐊᕐᒥᑦ ᐅᔭᕋᒃᑕᕆᐊᐸ ᐃᓗᐊᓃᑦᑐᓂᑦ. ᓂᕆᐅᒋᔭᐅᐋᖅ ᐊᐅᓛᖅᑎᑦᑎᓂᕐᒥᑦ ᐊᒻᒪᓗ ᐅᒃᑯᐊᖅᓯᒪᓕᖅᑎᓪᓗᒍ, ᐊᓯᐅᔨᓂᖅᑕᖅᓯᓂᐊᖅᑐᖅ 147.02 ᐃᓂᒋᔭᐅᐋᑦ ᐊᕕᒃᓯᒪᐋᓂᒃ ᐋᖅᑭᒃᓯᓂᖅᑕᖃᓐᐊᖅᓯᓂᐊᖅᓗᓂ ᐃᓚᒋᔭᐅᐋᑦ 35-ᒥᑦ ᐊᒻᒪᓗ 36-ᒥᑦ *ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᐱᖁᔭᕐᒥᑦ*.

ᑕᐃᒪᙵᓂᑦ 2015-ᒥᑦ, ᐊᒡᓃᑯᒃᑯᑦ ᑲᑎᖅᓱᐃᖏᓐᓇᖅᑐᑦ ᑭᒡᓕᐅᐋᓂᒃ ᐊᒻᒪᓗ ᑕᐃᒪᐅᐋᓂᒃ ᖃᓄᐃᖕᖓᓂᕐᓄᑦ ᓈᓴᐅᑎᓂᒃ/ᑎᑎᖅᖃᓂᒃ, ᐃᓚᓕᐅᑎᔭᐅᓯᒪᐸᓗᑎᒃ ᓄᑖᙳᖅᑎᖅᓯᒪᐋᖅ ᐊᕙᑎᒥᒃ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᖃᐅᔨᓂᐊᕐᓗᑎᒃ ᐊᒻᒪᓗ

ᖃᐅᔨᓴᕐᓗᒋᑦ ᐊᕙᑎᒧᑦ ᐊᒻᒪᓗ ᐃᓅᖃᑎᒌᓄᑦ ᖃᓄᐃᙱᓕᖅᑎᑦᑎᓂᐅᔪᓐᓇᖅᑐᑦ ᐱᔪᓂᒃ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᓂᒃ. ᓈᓴᐅᑎᓂᒃ/ᑎᑎᖅᑲᓂᒃ ᑲᑎᖅᓱᐃᓂᕐᒥᑦ ᐃᓚᐅᔪᑦ ᐊᕙᑎᐅᑉ (ᓱᕐᓗ, ᓄᓇ ᐊᒻᒪᓗ ᐃᑉᔪᐃᑦ, ᑯᐊᙳᐃᓐᓇᐅᔾᔮᖅᑐᖅ, ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᖃᓄᐃᓕᐅᕐᓃᑦ, ᓂᐱᖃᕐᓂᖅ, ᐊᒻᒪᓗ ᐃᒪᐅᑉ ᖄᖓᑕ ᖃᓄᐃᓐᓂᖓ ᐊᒻᒪᓗ ᖃᓄᑎᕆᐅᓂᖓ, ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᖓ), ᐆᒪᔪᖃᕐᓃᑦ (ᓱᕐᓗ, ᐱᕈᖅᑐᐃᑦ, ᓄᓇᒥᐅᑕᐃᑦ ᓂᕐᔪᑏᑦ, ᑎᖕᒥᐊᑦ ᐊᒻᒪᓗ ᑎᖕᒥᐊᓄᑦ ᐃᓂᕆᔭᐅᖃᑦᑕᖅᑐᑦ, ᐊᒻᒪᓗ ᐃᖃᓗᐃᑦ ᐊᓯᖕᖏᓪᓗ ᐃᒪᕐᒥᑦ ᐆᒪᔪᕆᓛᑦ, ᐊᒻᒪᓗ ᐃᒪᕐᒥᐅᑕᐃᑦ ᓂᕐᔪᑏᑦ), ᐊᒻᒪᓗ ᐃᓄᐃᑦ-ᐱᕈᖅᐸᓪᓕᐊᓂᖕᒋᑦ (ᓱᕐᓗ, ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ, ᐃᑦᑕᕐᓂᑕᖃᕐᕖᑦ, ᐊᒻᒪᓗ ᐃᓄᐃᑦ-ᐱᕈᖅᐸᓪᓕᐊᓂᖕᒋᑦ. ᖃᓄᐃᙱᓂᐅᔪᑦ ᐊᕙᑎᒥᒃ ᖃᐅᔨᓴᐃᓂᕐᒥᑦ ᖃᐅᔩᓚᐅᖅᑐᑦ ᐊᖏᓗᐊᖕᖏᐊᖅᑎᑦᑎᓂᖅ, ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᖅ ᐊᑯᓂᐅᔪᒥᒃ ᐊᖏᔪᒥᒃ ᐱᑦᑕᐅᖕᒋᑦᑐᒥᒃ ᖃᓄᐃᙱᓕᖅᑎᑦᑎᓂᖃᕐᓂᐊᖕᒋᑦᑐᖅ ᓴᓇᔭᐅᔪᓂᒃ ᐱᔪᓂᒃ, ᐊᐅᓚᖅᑎᑦᑎᓂᕐᓂᑦ, ᐊᒻᒪᓗ ᐅᒃᑯᐊᖅᐸᓪᓕᐊᓂᕐᒥᑦ.

ᐊᓪᓕᓐᓂᒃᑯᑦ ᐋᖅᑭᒃᓯᒪᐅᖅᑐᑦ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᑐᕌᖓᔪᓂᒃ ᐊᖏᓗᐊᖕᖏᐊᖅᑎᑦᑎᔾᔪᑕᐅᓂᐊᖅᑐᑦ, ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐅᓂᑉᑳᓕᐅᕆᓂᕐᒧᑦ ᐊᕙᑎᐅᑉ ᖃᓄᐃᓕᐅᕐᓂᖓᓄᑦ ᒪᓕᒐᓕᕆᓂᕐᒧᑦ ᐱᔭᕆᐊᓕᖕᓄᑦ ᐃᓗᐊᓈᑦᑐᓂᒃ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐊᐅᓚᖅᑎᑦᑎᓂᕐᒧᑦ ᐱᔪᓐᓇᖅᑎᑦᑎᔾᔪᑎᓂᑦ, ᐳᒥᑦᓂᑦ, ᓚᐃᓴᓐᓯᓂᑦ, ᐊᒻᒪᓗ ᐊᑐᖅᑐᐊᕐᓂᕐᒧᑦ ᐊᔾᔨᒋᔭᖕᒋᑦ ᒪᓕᒐᒃᑯᑦ ᐱᔭᕆᐊᖃᕐᓂᐅᔪᑦ ᐊᑐᖅᑐᓂᑦ ᐱᕐᑯᔭᓂᑦ ᐊᒻᒪᓗ ᒪᓕᒐᕋᓛᓂᑦ ᓄᓇᕗᒻᒥᑦ. ᓇᓚᐅᑦᑎᓐᓂᑦ ᐊᕙᑎᒥᒃ ᐊᒃᑐᖅᓯᓂᕐᒧᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᓂᑦ ᐊᒻᒪᓗ ᐊᑑᑎᖃᕐᓂᖕᒋᑦ ᐊᖏᓗᐊᖕᖏᐊᖅᑎᑦᑎᓂᕐᒨᖓᔪᑦ ᓇᓗᓇᐃᖅᑕᐅᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᐃᓂᒃᑯᑦ ᐊᒻᒪᓗ ᐊᕐᕌᒍᑕᓖᒃᑯᑦ ᐅᓂᑉᑳᓕᐅᕆᓂᒃᑯᑦ. ᐊᔾᔨᐅᖕᒋᑦᑐᒥᒃ ᐅᕝᕙᓘᓐᓃᑦ ᓂᕆᐅᒋᔭᐅᖕᒋᑦᑐᖅ ᐊᖏᔪᒥᒃ ᐊᕙᑎᒥᒃ ᐊᒃᑐᖅᓯᓂᐅᔪᑦ ᖃᐅᔨᔭᐅᒃᐸᑕ, ᐋᖅᑭᒋᐊᖅᓯᓂᐅᔪᓂᒃ ᐋᖅᑭᒃᓯᓂᐊᖅᑐᑦ. ᐊᑐᓕᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᒃᑯᑦ, ᑕᐃᒪᐅᔪᖅ ᐊᑐᓕᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᐸᕐᓇᐅᑎ ᐊᒻᒪᓗ ᑕᐃᒪᐅᔪᖅ ᐊᕙᑎᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᒥᐊᓂᖅᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ, ᑕᐃᒪᐅᔪᖅ ᐊᖏᓗᐊᖕᖏᐊᖅᑎᑦᑎᓂᕐᒨᖓᔪᑦ ᐊᑐᕐᓂᐊᖅᑐᑦ ᑭᓯᐊᓂ ᐋᖅᑭᐊᖅᑕᐅᒃᑲᑦᑕᕐᓂᐊᖅᑐᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐊᖏᓗᐊᖕᖏᐊᖅᑎᑦᑎᓂᕐᒨᖓᔪᑦ ᐊᑐᓕᖅᑕᐅᓗᑎᒃ ᐱᔭᕆᐊᖅᑲᖅᐸᑦ.

ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᖅ ᑲᔪᓯᓂᖃᖅᑎᑦᑎᓂᐊᖅᑐᖅ ᐱᕈᖅᐸᓪᓕᐊᓂᖃᕐᓂᕐᒧᑦ ᐃᑲᔫᑎᓂᒃ ᐅᑭᐅᓄᑦ ᐅᖓᑖᓅᖅᑐᓄᑦ ᓄᖅᑲᖅᖄᖅᑎᓪᓗᒍ ᐅᔭᕋᒃᑕᕆᐊᖅ. ᐱᕈᖅᐸᓪᓕᐊᓂᕐᒥᒃ ᐱᑎᑦᑎᔪᑦ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᕐᒥᑦ ᐊᖏᔫᔪᖅ ᐊᒻᒪᓗ ᓂᕆᐅᒋᔭᐅᔪᖅ ᐊᖏᔪᒥᒃ ᐃᑲᔪᐃᓂᖃᕐᓂᐊᕐᓂᖓᓄᑦ ᓄᓇᕗᒻᒧᑦ. ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᖅ ᓂᕆᐅᒋᔭᐅᔪᖅ 205 ᓄᑖᓂᒃ ᐱᓕᕆᐊᒃᓴᓂᒃ ᓴᖅᑭᑦᑎᓂᐊᕐᓂᖓᓄᑦ ᐊᐅᓚᖅᑎᑦᑎᓂᖃᑦᑎᐊᕐᓇᐅᑎᓪᓗᒍ ᐃᓚᒋᔭᐅᓗᑎᒃ ᓴᖅᑭᑕᐅᔪᑦ ᐅᔭᕋᒃᑕᕆᐊᑉ ᐊᐅᓚᕐᓂᕆᓂᐊᖅᑕᖓᓄᑦ ᐊᒻᒪᓗ ᐊᑯᓂᐅᒃᑲᓐᓂᕐᓂᖅᓴᒥᒃ ᐱᓕᕆᔪᓐᓇᕐᓗᑎᒃ ᐊᒻᒪᓗ ᑮᓇᐅᔭᓕᐅᕐᓗᑎᒃ ᑎᑭᓪᓗᒍ 2043-ᒧᑦ. ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᖅ ᐱᑦᑕᐅᔪᒥᒃ ᐊᑯᓂᐅᔪᒥᒃ ᐃᑲᔪᐃᓂᖃᕐᓂᐊᖅᑐᖅ ᓄᓇᓕᖕᓄᑦ, ᓱᕐᓗ ᐃᓪᓗᒥᐅᖃᑎᒌᑦ ᑮᓇᐅᔭᓕᐊᖕᒋᓐᓄᑦ ᐊᒻᒪᓗ ᓂᕿᑦᑎᐊᕙᖃᕈᓐᓇᕐᓂᕐᒧᑦ, ᐱᙳᐊᕐᓂᕐᓄᑦ, ᐃᓕᓐᓂᐊᕐᓂᕐᒧᑦ, ᐊᒻᒪᓗ ᐱᕚᐅᖃᑦᑕᖅᑐᓄᑦ ᐱᖅᑯᓯᒃᑯᑦ ᐊᑐᖅᑕᐅᕙᒃᑐᓂᑦ. ᐊᔾᔨᑦᓚᖓ, ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᖅ ᐃᑲᔪᐃᖕᒋᓐᓇᕐᓂᐊᖅᑐᖅ ᓄᓇᓕᖕᒥᑦ ᑐᕌᖓᔪᓕᕆᓂᕐᒥᒃ ᐊᒻᒪᓗ ᐃᓕᓐᓂᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐱᓕᕆᐊᓂᒃ, ᐊᒻᒪᓗ IIBA-ᑯᑦ ᑮᓇᐅᔭᖅᑖᖅᑎᑦᑎᓂᕐᓂᒃ ᐊᒻᒪᓗ ᐱᓂᐊᕐᓂᕆᔭᖕᒋᓐᓂᑦ.

ᑕᐃᒪᙶᓂᑦ ᐊᐅᓛᓕᕐᒪᑦ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᔭᕋᒃᑕᕆᐊᖅ, ᐊᓪᓕᓐᓂᒃᑯᑦ ᑭᑐᑐᐃᓐᓇᓂᒃ ᐅᖃᖃᑎᖃᖃᑦᑕᖅᓯᒪᔪᑦ ᐊᕐᕌᒍᑕᓖᒃᑯᑦ ᑲᑎᒪᑎᑦᑎᓂᒃᑯᑦ ᓄᓇᓕᖕᒥᐅᓂᑦ ᐊᒻᒪᓗ ᓄᓇᓕᖕᒥᑦ ᐃᓚᒋᔭᐅᔪᓂᒃ ᑭᕙᓪᓕᐅᑉ ᐃᓗᐊᓂᑦ, ᒪᓕᒐᓕᕆᓂᕐᒧᑦ ᐱᔾᔪᔾᔨᔨᓂᒃ, ᐊᒻᒪᓗ ᓄᓇᓕᖕᒥᑦ ᐱᓕᕆᕝᕕᐅᔪᓂᑦ. ᑕᐃᒪᓐᓇ ᑐᑭᓯᐊᓂᖃᕐᓂᖕᓴᐅᑎᑦᑎᔪᖅ ᐱᔪᓐᓇᐅᑎᓂᒃ, ᐱᔪᒪᓂᖃᕐᓂᐅᔪᓂᒃ, ᐱᒻᒪᕆᐅᕆᔭᐅᔪᓂᒃ, ᓂᕆᐅᕆᔭᐅᔪᓂᒃ, ᐊᒻᒪᓗ ᐃᓱᒫᓘᑕᐅᔪᓂᒃ ᐊᒃᑐᖅᓯᓂᖃᖅᑐᑦ ᐃᓚᐅᖃᑕᐅᔪᓂᒃ, ᐱᓗᐊᖅᑐᒥᑦ ᐱᔾᔪᑎᒋᐸᓗᒍ ᑲᖕᒋᖅᖠᓂᖅ. ᐅᖃᖃᑎᖃᖃᑦᑕᕐᓂᒃᑯᑦ, ᐊᓪᓕᓐᓂᒃᑯᑦ ᐋᖅᑭᒃᓯᒪᐅᖅᑐᑦ ᐊᐅᓚᖅᑎᑦᑎᓂᕐᒧᑦ ᐱᖅᑯᓯᕆᔭᐅᔪᒥᒃ ᐃᓕᑕᖅᓯᔪᖅ ᐊᒻᒪᓗ ᐃᒃᐱᒍᓱᒻᒪᕆᖅᖢᓂ ᐱᔪᒪᓂᕆᔭᐅᔪᓂᒃ ᐸᕐᓇᐃᑎᓪᓗᒋᑦ ᐊᒻᒪᓗ ᐱᓕᕆᐊᖅᑕᕆᐊᖅᑎᓪᓗᒋᑦ. ᐊᓪᓕᓐᓂᒃᑯᑦ

ᐅᖃᖃᑎᖃᖅᓯᒪᔪᑦ ᓄᓇᓕᖕᒥᑦ ᐃᓚᒌᔭᐅᔪᓂᒃ ᐊᒻᒪᓗ ᒪᓕᒐᓕᕆᓂᕐᒥᒃ ᐱᓕᕆᐊᓕᖕᓂᒃ ᐊᐅᓛᖅᑎᑕᐅᓂᖓᑕ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᔭᕋᒃᑕᕆᐊᖅ, ᐊᒻᒪᓗ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᐅᔪᒪᔫᑉ ᒥᒃᓵᓄᑦ.

ᐅᖃᖃᑎᖃᕐᓂᒃᑯᑦ, ᑎᑎᖅᖃᓂᒃ ᕿᒥᕐᕈᓂᒃᑯᑦ ᐊᒻᒪᓗ ᐱᓕᕆᕝᕕᖕᒥᑦ ᖃᐅᔨᓴᐃᓂᒃᑯᑦ, ᖃᓄᐃᑦᑑᓂᖕᒋᑦ ᐊᒻᒪᓗ ᐃᓂᒋᔭᖕᒋᑦ ᐋᖅᑭᐊᖅᓯᓂᕐᒧᑦ ᐱᓕᕆᐊᖑᔪᑦ ᓯᕗᒻᒧᕆᐊᖅᓯᒪᔪᑦ ᒪᓕᒃᓱᕆᑦ ᐃᓗᐊᓃᑦᑐᑦ 2014 FEIS-ᒥᑦ ᐊᒻᒪᓗ ᑕᐅᑐᒐᐅᔪᖅ ᐋᖅᑭᐊᖅᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒥᑦ. ᐅᖃᐅᓯᐅᔪᓂᑦ, ᓯᕗᓪᓕᖅᐸᐅᑎᔭᐅᔪᒪᔪᑦ ᐋᖅᑭᐊᖅᓯᓂᕐᒧᑦ ᐱᓕᕆᐊᕐᓂᑦ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᐃᒍᕆᐊᖅᓯᓂᕐᒥᑦ ᐃᓚᐅᔪᑦ ᐅᑎᖅᑎᑎᕆᓂᖅ ᐅᔭᕋᒃᑕᖅᑕᐅᓯᒪᔪᑦ ᓄᓇᒥᑦ ᐃᓗᑦᑐᖅᓯᒪᔪᓂᑦ ᑕᓯᕐᒥᑦ ᐃᓂᐅᔪᓕᐅᕐᓗᓂ. ᐊᑐᖅᑕᐅᖕᒑᕈᖕᓇᖅᑐᖅ ᐃᓂᓕᐅᕆᓂᐊᖅᑐᖅ ᐃᒪᕐᒥᐅᑕᐃᑦ ᐃᓂᒋᖃᑦᑕᖅᑕᖕᒋᓐᓂᑦ, ᑎᑎᕋᖅᓯᒪᓂᖓᑐᑦ 2014 ᑕᐅᑐᒐᐅᔪᖅ ᐋᖅᑭᐊᖅᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒥᑦ, ᑲᑎᓐᓂᖃᓕᕐᓗᒋᑦ ᐃᒪᖃᕐᓂᐅᔪᑦ ᓄᑖᓄᑦ ᓄᓇᒥᑦ ᐃᓗᑦᑐᖅᓯᒪᔪᒥᑦ ᐃᒪᕐᒥᑦ ᐃᓂᓕᐊᖑᔪᓄᑦ ᐊᒻᒪᓗ ᐃᒪᐃᔭᖅᓯᒪᔪᑦ ᑕᓯᕝᕕᓂᕐᓄᑦ, ᒪᓐᓂᓕᐅᕆᓂᕐᒧᑦ ᐃᒡᓕᖅᑕᖃᐅᓕᕐᓗᓂ ᐊᒃᑐᖅᑕᐅᓯᒪᔪᓂᑦ ᐃᓂᐅᔪᓂᑦ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᕐᓗᒍ ᑕᓯᑦᓈᖅ (ᐃᒪᖅᑖᕐᕝᕕᐅᖃᑦᑕᖅᑐᖅ ᑲᖕᒋᖅᓱᓂᕐᒧᑦ) ᐅᑎᖅᑎᑎᓪᓗᒋᑦ ᐃᒪᖅᑯᖅᑐᑎᕆᕙᓚᐅᕐᓂᖓ ᐊᒻᒪᓗ ᐃᖃᓗᒃᐲᑦ ᑕᐃᑲᓃᑦᑐᑦ.

ᑕᒪᒃᑯᐊ ᐱᓕᕆᐊᑦ ᑎᑯᓕᐊᖅᓯᒪᔪᑦ ᖃᓄᐃᓕᐅᕆᐊᖃᕐᓂᕐᓄᑦ ᐃᖃᓗᓕᕆᔩᒃᑯᑦ ᐊᑐᐊᒐᖕᒐᓐᓂᑦ ᐊᑐᕐᓂᐊᕐᓗᓂ ᐱᓕᕆᐊᖑᔪᓄᑦ ᐋᖅᑭᐊᖅᓯᓂᕐᒥᒃ ᐊᖏᔪᒥᒃ ᖃᓄᐃᖓᓕᖅᑎᑦᑎᓂᖃᖅᑐᓂᒃ ᐃᖃᓗᖕᓄᑦ ᐊᒻᒪᓗ ᐃᓂᒋᖃᑦᑕᖅᑕᖕᒋᓐᓄᑦ ᒪᓕᒃᓱᒍ ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᐱᕐᑯᔭᖅ (ᐃᖃᓗᓕᕆᔩᒃᑯᑦ 2019) ᑖᓐᓇ ᐃᓕᑕᖅᓯᔪᖅ ᐅᑯᓂᙵᑦ ᐃᓂᐅᔪᓂᒃ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᓂᒃ ᐋᖅᑭᐊᖅᓯᓂᕐᒧᑦ ᐃᖃᓗᖕᓂᒃ ᐊᒻᒪᓗ ᐃᖃᓗᖕᓄᑦ ᐃᓂᒋᔭᐅᔪᓂᒃ ᐊᒃᑐᖅᓯᓂᕐᓄᑦ; ᐃᓂᒋᔭᐅᔪᓂᒃ ᐅᑎᖅᑎᑎᕆᓂᖅ ᐊᒻᒪᓗ ᐱᐅᓯᕆᐊᖅᓯᓂᖅ, ᐃᓚᐅᑉᓗᑎᒃ ᐋᖅᑭᒃᓯᕐᓗᒋᑦ ᐃᓂᒋᔭᐅᖃᑦᑕᖅᑐᑦ ᐱᐅᓯᕆᐊᕐᓂᐊᕐᓗᒋᑦ ᐊᔪᙱᓐᓂᖕᒋᑦ ᐊᒻᒪᓗ ᒪᓐᓂᓕᐅᕈᖕᓇᕐᓂᖕᒋᑦ, ᐃᓂᒋᔭᐅᔪᓕᐅᕐᓗᓂ ᑕᐃᒪᓐᓇ ᐱᕙᓪᓕᐊᓂᐅᔪᖅ ᐅᕝᕙᓘᓐᓃᑦ ᐊᖏᒡᓕᕆᐊᖅᓯᓂᐅᔪᑦ ᐃᒪᕐᒥᐅᑕᓄᑦ ᐃᓂᒋᔭᐅᖃᑦᑕᖅᑐᓂᒃ ᓄᓇᒦᑦᑐᒥᑦ, ᐆᒪᔪᓕᕆᓂᕐᓂᒃ ᐱᓕᕆᐊᖃᕐᓗᓂ, ᐃᓚᐅᑉᓗᓂ ᐱᓕᕆᐊᖑᓂᖕᒋᑦ ᐃᒪᖃᕐᓂᐅᔪᑦ, ᐊᒻᒪᓗ ᐃᖃᓗᓕᖅᑐᐃᓗᓂ ᐅᕝᕙᓘᓐᓃᑦ ᐅᕝᕙᓗᕋᓗᖕᓂᑦ, ᐱᓕᕆᐊᕆᓗᒋᑦ ᑕᓖᓂᕐᒥᐅᑕᐅᖕᒋᑦᑐᑦ ᐃᒪᕐᒥᐅᑕᐃᑦ (ᓲᕐᓗ, ᒪᓐᓂᓕᐅᕆᓃᑦ), ᐊᒻᒪᓗ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᑦ, ᑕᐃᒪᓐᓇᐃᓕᐅᕐᓗᓂ ᓈᓴᐅᑎᓂᒃ/ᑎᑎᖅᖃᓂᒃ ᑲᑎᖅᓱᐃᓂᐅᔪᑦ ᐊᒻᒪᓗ ᖃᐅᔨᓇᓱᖕᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᓂᕐᒨᖓᔪᑦ ᑲᒪᒋᓂᐊᕐᓗᒋᑦ ᐅᕙᓘᓐᓃᑦ ᐱᐅᓯᕆᐊᕐᓂᐊᕐᓗᒋᑦ ᓂᐅᕕᐊᒃᓴᓕᐅᕆᓂᖅ, ᕐᑯᕕᐊᕆᔭᐅᔪᓂᒃ ᐅᕙᓘᓐᓃᑦ ᓄᓇᖃᖅᑳᖅᑐᑦ ᐃᖃᓗᓕᕆᓂᖕᒋᓐᓄᑦ.

EXECUTIVE SUMMARY

Agnico Eagle is proposing an extension (referred to as the Meliadine Extension) to the Approved Meliadine Mine located approximately 25 kilometers north of Rankin Inlet, and 80 kilometers southwest of Chesterfield Inlet in the Kivalliq region of Nunavut. Nunavut Impact Review Board (NIRB) Project Certificate No.006 was issued in 2015 and the environmental assessment of the Meliadine Mine, resulting in the issuance of Project Certificate No.006 in 2015, included approval of a multi-phase approach to development, including mining of Tiriganiaq deposit using open pit and underground mining methods and mining of the Pump, F zone, Discovery and Wesmeg deposits using open pit methods. Type A Water Licence 2AM-MEL1631 issued in 2016 was primarily for the Tiriganiaq deposit and associated infrastructure including, process plant, camp, tailings storage facility and waste rock storage facilities.

The Meliadine Extension proposes to include underground mining and associated saline water management infrastructures at the Pump, F zone, and Discovery deposits, development of a new portal and associated infrastructures in the Tiriganiaq-Wolf area, construction and operation of a windfarm and use of additional borrow pits and quarries. Approved infrastructure, such as the camp, mill, water management infrastructures, power plant, tailings storage facility, All-weather Access Road, freshwater intakes and treatment plants would continue to be used. No changes are proposed to the Rankin Inlet facilities. The life of the mine would be extended by an additional 11 years until 2043, closure will occur from 2044 to 2050, and post-closure from 2051 to 2060.

Options and alternatives that are also proposed as part of the Meliadine Extension include construction and operation of an on-site airstrip, a waterline to discharge saline water to Itivia Harbour, and the use of exhausted open pits to store tailings and waste rock.

The Extension will result in unavoidable harmful alteration, disruption, or destruction of fish habitat through direct habitat loss from infrastructure footprint, change in flows, as well as through the deposition of mine waste and associated management of contact water and saline water. The Extension is anticipated to result in fish habitat losses within the Meliadine Mine. It is estimated that during both the operations and post-closure phases, there will be a loss of 147.02 habitat units which will be required to be offset through Sections 35 and 36 of the *Fisheries Act*.

Since 2015, Agnico Eagle has continued to collect baseline and existing conditions data, which has been incorporated into the updated environmental assessment to identify and assess potential environmental and social effects resulting from the Meliadine Extension activities. Data collection included physical environment (e.g., terrain and soils, permafrost, geochemistry, noise, and surface water quantity and quality, marine water quality), biological environment (e.g., vegetation, terrestrial wildlife, birds and bird habitat, and fish and other aquatic organisms, and marine wildlife), and the socio-economic environment (e.g., IQ, archaeology, and socio-economics). The results of the environmental assessment found that with mitigation, the Meliadine Extension will not cause long-term significant negative effects resulting from proposed construction, operations, and closure.

Agnico Eagle has developed monitoring and management programs required to mitigate, monitor, and report on its environmental performance against the regulatory requirements contained within its Meliadine operating authorizations, permits, licenses, and leases consistent with the legal requirements of applicable Acts and Regulations in Nunavut. The accuracy of the environmental impact predictions and the effectiveness of the mitigation measures will be verified through monitoring and annual reporting. If unusual or unforeseen adverse environmental impacts are noticed, corrective action will be put in place. Through the adaptive management process, the existing Adaptive Management Plan and the existing Environmental Management and Protection Plan, the existing mitigation measures are effective however will be adjusted or new mitigation measures implemented if necessary.

The Meliadine Extension represents the continuation of economic benefits into years beyond the end of mining of the Existing life of mine. The economic effects of the Meliadine Extension are substantial and are expected to be of significant benefit to the territory. The Meliadine Extension is expected to generate 205 new employment opportunities during the peak year of operation incremental to those created by the existing life of mine and extend employment and incomes until 2043. The Meliadine Extension will continue to have positive effects in communities for an extended period, in terms of household incomes and associated access to nutritious food, recreation, education, and resources with which to conduct traditional activities. Similarly, the Meliadine Extension will continue support for community programming and educational initiatives, as well as IIBAs royalties and commitments.

Since operations of the Meliadine Mine began, Agnico Eagle has continued public consultation by annually meeting with the community and local stakeholders within the Kivalliq region, regulatory agencies, and local employees. This has allowed a better general understanding of the rights, interests, values, aspirations, and concerns of the potentially affected stakeholders, with particular reference to Rankin Inlet. Through this continued consultation, Agnico Eagle has developed an operational culture that recognizes and respects these relevant interests in the planning and executing processes. Agnico Eagle has consulted with local stakeholders and regulators regarding ongoing operations of the Meliadine mine, as well as proposed Meliadine Extension.

Through consultation, literature reviews and field investigations, the types and locations of offsetting projects have been further advanced based on those presented in the 2014 FEIS and Conceptual Offsetting Plan. Based on feedback, the priority offsetting projects for the Meliadine Extension include restoration of mining pits into lake habitat. This option produces habitat gains by creating aquatic habitats, as outlined in the 2014 Conceptual Offsetting Plan, reconnecting watercourses to new pit lake habitat and dewatered lake basins, creating spawning pads in the impacted area and the enhancement of Nipissar Lake (water supply for the Hamlet of Rankin Inlet) to restore water levels and resident Arctic Char populations.

These projects align with guidance presented in DFO's Policy for Applying Measures to Offset Adverse Effects on Fish and Fish Habitat under the Fisheries Act (DFO 2019) which identifies the following four categories of measures to offset fish and fish habitat impacts; habitat restoration and enhancement, which includes physical manipulation of existing habitat to improve habitat function and productivity, habitat creation which is the development or expansion of aquatic habitat into a terrestrial area, chemical

or biological manipulation, which includes chemical manipulation of water bodies, and stocking of fish or shellfish, management or control of aquatic invasive species (e.g., fertilization, hatchery), and complementary measures, which are investments in data collection and scientific research related to maintaining or enhancing the productivity of commercial, recreational or Aboriginal fisheries.

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SECTION 1 • INTRODUCTION

Agnico Eagle Mines Limited (Agnico Eagle) is operating the Meliadine Mine, located approximately 25 km north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut. Figure 1.1-1 presents the Meliadine Mine location and leases.

On October 10, 2014, the Nunavut Impact Review Board (NIRB) provided the Minister with the Final Hearing Report and recommended Terms and Conditions for the Meliadine Project. The Minister accepted the NIRB's recommendation on January 27, 2015 and Project Certificate No.006 was issued on February 26, 2015. This included the approval of the Tiriganiaq deposit and the F Zone, Wesmeg, Pump, and Discovery deposits of the Meliadine Mine and the associated infrastructure.

On May 19, 2016, the Minister approved the Type A Water Licence 2AM-MEL1631 to begin construction and operation of the Meliadine Mine. At that time, Agnico Eagle only applied for the Type A Water Licence required to proceed with the Tiriganiaq deposit. As indicated at that time, amendments are required to proceed with the other deposits, as part of this application (Meliadine Extension) included in Project Certificate No.006.

Since the Project Certificate was issued, the Meliadine Mine has been subject to two reconsiderations by NIRB. On February 26, 2019 the NIRB provided a positive decision to amend the Project Certificate to include discharge of saline effluent to the marine environment via diffuser at Itivia Harbour and to convey via truck saline effluent along the All Weather Access Road (AWAR) to Itivia Harbour (i.e., Melvin Bay). On January 31, 2022 the Minister provided a positive decision to amend the Project Certificate to include the conveyance of saline effluent via a waterline along the AWAR (instead of via truck), to accommodate an increased volume of discharge at Itivia Harbour.

On June 23, 2021, the Minister approved the Type A Water Licence 2AM-MEL1631 Amendment which included updated total dissolved solids (TDS) thresholds to Meliadine Lake, increase of annual freshwater consumption, additional laydown area, additional landfarm, updated waste management strategy, construction of access roads, and an updated Interim Closure and Reclamation Plan (ICRP).

It is anticipated that only limited scope NIRB consideration will be required in relation to Meliadine Extension and that the file will be subject to more detailed focus at the Nunavut Water Board (NWB) Type A Water Licence amendment phase.

Agnico Eagle will also amend its Type A Water Licence 2AM-MEL1631 and other required permit/approvals to include Meliadine Mine Phase 2 and Extension activities.

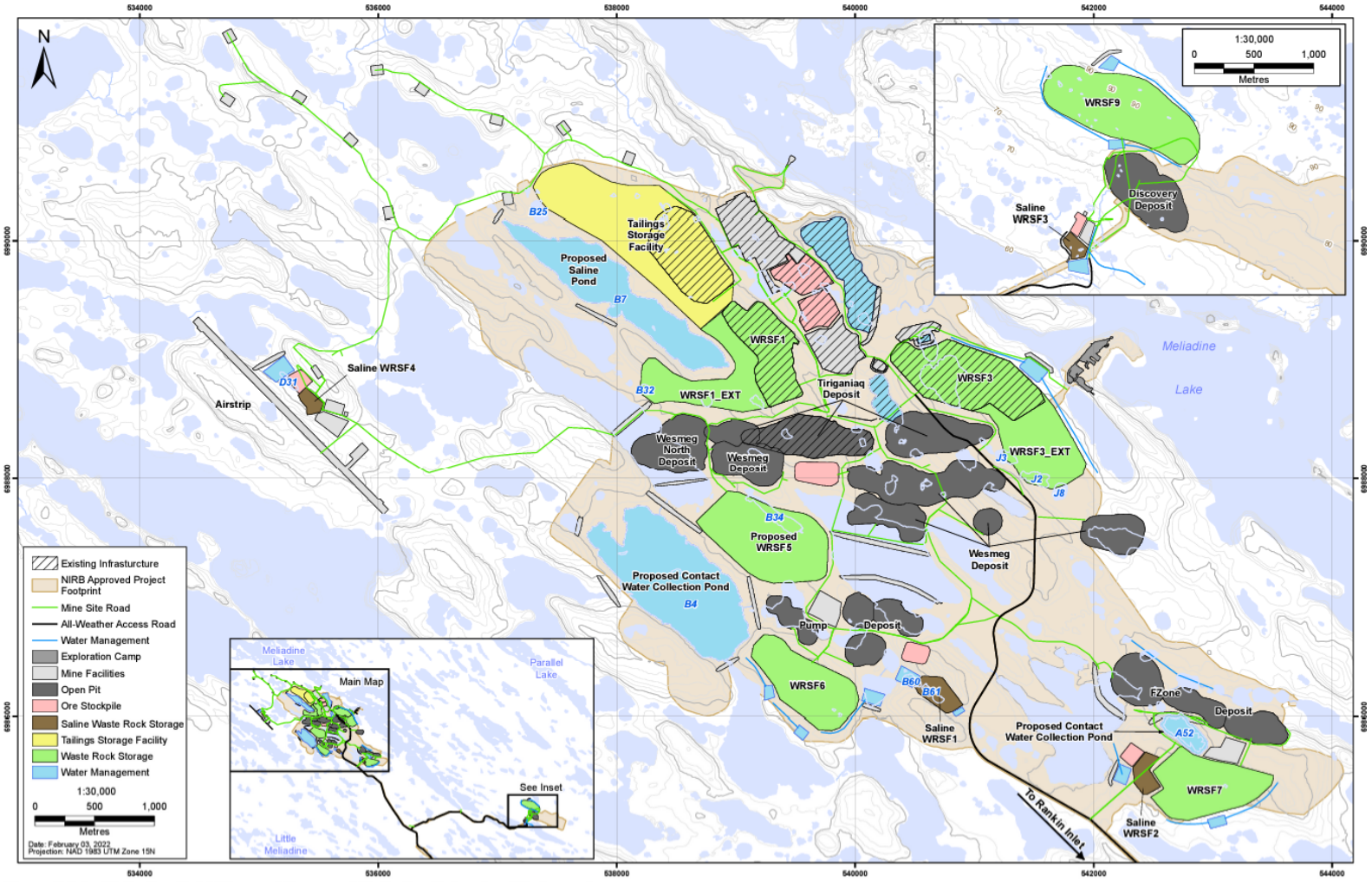
Figure 1.1-1: General Mine Site Location

The Meliadine Extension will potentially affect fish and fish habitat through mine infrastructure, expansion of approved facilities, as well as through the deposition of mine waste and associated management of contact and saline water. The Meliadine Extension is anticipated to result in additional fish habitat losses, with the majority of the area impacted within the 2014 NIRB approved Meliadine Mine footprint. Refer to Figure 1.1-2 for an overview of the site layout.

These additional fish habitat losses will arise from both footprint and deposition activities and require a *Fisheries Act* Authorization under Sections 35 and 36 of the *Fisheries Act.*

Subsection 35(1) of the *Fisheries Act* prohibits the harmful alteration, disruption or destruction (HADD) of fish habitat. Where proponents are unable to avoid or mitigate HADD of fish habitat, projects require authorization under subsection 35(2) of the *Fisheries Act* in order for the project to proceed without contravening the Act. As part of an Application for Authorization under Paragraph 35(2)(b), proponents develop an offsetting plan that counterbalances the unavoidable HADD of fish habitat. The habitat protection provisions of the *Fisheries Act* are administered by Fisheries and Oceans Canada (DFO).

Figure 1.1-2: Meliadine Gold Mine and Proposed Meliadine Extension Site Layout



1.1 Regulatory Context

The operating Meliadine Mine was subject to the environmental and socio-economic impact assessment and permitting processes established under the Nunavut Agreement. Article 12, Part 5 of the Nunavut Agreement sets out the environmental and socio-economic review and assessment requirements managed by the NIRB.

Following a Part 5 public review, the NIRB provided the Minister with the Final Hearing Report and recommended Terms and Conditions for the Meliadine Project. On October 10, 2014, the Minister accepted the NIRB's recommendation on January 27, 2015 and Project Certificate No.006 was issued on February 26, 2015. This included the approval of the Tiriganiaq deposit and the F Zone, Wesmeg, Pump, and Discovery deposits of the Meliadine Mine and the associated infrastructure.

On May 19, 2016, the Minister approved the Type A Water Licence 2AM-MEL1631 to begin construction and operation of the Meliadine Mine. At that time, Agnico Eagle only applied for the Type A Water Licence required to proceed with the Tiriganiaq deposit. As indicated at that time, amendments would be required to proceed with the other deposits (F Zone, Wesmeg, Pump, and Discovery) included in Project Certificate No.006.

Since the Project Certificate was issued, the Meliadine Mine has been subject to two reconsiderations by NIRB. On February 26, 2019 the NIRB provided a positive decision to amend the Project Certificate to include discharge of saline effluent to the marine environment via diffuser at Itivia Harbour and to convey via truck saline effluent along the All Weather Access Road (AWAR) to Itivia Harbour (i.e., Melvin Bay). The Minister provided a positive decision to amend the Project Certificate to include the conveyance of saline effluent via a waterline along the AWAR (instead of via truck), to accommodate an increased volume of discharge at Itivia Harbour.

On June 23, 2021, the Minister approved the Type A Water Licence 2AM-MEL1631 Amendment which included updated total dissolved solids (TDS) thresholds to Meliadine Lake, increase of annual freshwater consumption, additional laydown area, additional landfarm, updated waste management strategy, construction of access roads, and an updated Interim Closure and Reclamation Plan (ICRP).

The current permits, leases, approvals and authorizations received as part of the Meliadine regulatory history outlined above are provided in Table 1.1-1.

For the Meliadine Extension, Agnico Eagle is seeking approvals and permits required to proceed with mining of the deposits that were not included in the Water Licence and associated approved activities. An Authorization under the *Fisheries Act* will be required for unavoidable impacts to fish and fish habitat.

Table 1.1-1: List of Permits, Leases, Approvals and Authorizations

Permit or Authorization	Status
NIRB Project Certificate No.006,	Approval received February 26, 2015
NIRB Project Certificate No.006, Amendment 001	Approval received February 26, 2019
NIRB Project Certificate No.006, Amendment 002	Approval received March 3, 2022
NWB Type A Water Licence 2AM-MEL1631	Approval received May 19, 2016
NWB Type A Water Licence 2AM-MEL1631, Emergency Amendment	Approval received May 12, 2020
NWB Type A Water Licence 2AM-MEL1631, Amendment 001	Approval received June 23, 2021
KivIA Production Lease KVPL11D01	Issue date of June 30, 2017; Expiry date of June 29, 2027
KivIA Quarry Permit KVCA07Q08	Issue date of July 19, 2018; Expiry date of September 12, 2021
KivIA Quarry Permit KVCA11Q01	Issue date of April 19, 2021; Expiry date of April 19, 2024
KivIA Road Lease KVRW11F02	Issue date of April 19, 2021; Expiry date of June 29, 2024
Nunavut Airports Laydown Area Lease LE-03-320-0036	Issue date of July 1, 2021; Expiry date of June 30, 2031
Nunavut Airports Bypass Road Lease 102893	Issue date of July 1, 2017; Expiry date of July 1, 2027
GN-CGS Bypass Road Lease L-51808T	Issue date of June 1, 2017; Expiry date of May 31, 2027
GN-CGS AWAR Road Lease L-51809T	Issue date of June 1, 2017; Expiry date of May 31, 2027
CIRNAC Diffuser Lease 55K/16-42-2	Issue date of June 14, 2019; Expiry date of July 13, 2034
DFO Letter of Advice 11-HCAA-CA7-00014	Approval received in 2016

There are two provisions of the *Fisheries Act* that are relevant to the Meliadine Extension.

As mentioned above, subsection 35(1) of the *Fisheries Act* prohibits the HADD of fish habitat. Where proponents are unable to avoid or mitigate HADD of fish habitat, projects require authorization under subsection 35(2) of the *Fisheries Act* in order for the project to proceed without contravening the Act. For the Application for Authorization, proponents develop an offsetting plan that counterbalances the unavoidable HADD of fish habitat. Subsection 36(3) of the *Fisheries Act* prohibits the deposit of deleterious substances of any type in water frequented by fish, unless the waterbody is designated as a tailings impoundment area (TIA) through an amendment to Schedule 2 of the Metal and Diamond Mining Effluent Regulations (MDMER). The MDMER regulate the deposit of mine waste (including mine effluent, mine contact water, waste rock, tailings, low-grade ore and/or overburden) into natural waters frequented by fish. Proponents that seek to use a natural waterbody frequented by fish to store mine waste must conduct an assessment of alternatives. The pollution prevention provisions of the Fisheries Act are administered by Environment and Climate Change Canada (ECCC).

A Conceptual Offsetting Plan for the Meliadine Mine was consulted on and reviewed as part of the approved 2014 Final Environmental Impact Statement (FEIS). At that time, the *Fisheries Act* was focused on preventing “serious harm to commercial, recreational, and Aboriginal fisheries”. The Meliadine Mine plan was reviewed by DFO and a Letter of Advice was issued advising that no serious harm was predicted from the works, undertakings, and activities proposed at that time.

In response to the Meliadine Mine licence amendment for Project Certificate No.006, a FEIS Addendum was submitted for the proposed Meliadine Extension and this Conceptual Offsetting Plan is appended to the FEIS to address any potential effects to fish and fish habitat.

1.2 Report Structure

Although two different regulatory agencies administer Section 35 and Section 36 of the *Fisheries Act*, offsetting plans to support each application require DFO approval. One fish habitat conceptual offsetting plan has been prepared to facilitate indigenous, public and regulatory review. It is recognized that separate accounting is required for each of the *Fisheries Act* provisions, and the fish habitat offsetting plan has therefore been organized to clearly differentiate between habitat losses and gains under each of the Section 35 (direct habitat impacts) and Section 36 (loss of habitat due to deleterious substances). The outline of the fish habitat offsetting plan follows the Information and Documents to be Provided in Schedule 1 of the *Fisheries Act* (Appendix A of this report provides a Table of Concordance to Schedule 1), section 27.1 of the MDMER (Appendix B of this report provides a Table of Concordance to S.27.1) and Appendix C of this report provides offsetting and contingency options.

SECTION 2 • RELATED DOCUMENTS

2.1 Project Overview

Mine development and operation plans and activities that are part of the Meliadine Extension have the potential to interact with waterbodies in the Project area. These include refinements to plans and activities that were included in the original application that was approved by the NIRB as well as the new activities described in Section 2.2. Additional details are provided below:

Mining areas: Meliadine Extension proposes the development of underground mining activities at the Wesmeg, Normeg, Wolf, Pump, F Zone, and Discovery gold deposits. Open pit activities are already approved at the Pump, F Zone, and Discovery deposits.

Life of mine: An approximately twenty year active mine life is estimated based on mineral resources for the deposits that are part of the Meliadine Gold Mine Project (including Meliadine Phase 2).

Waste rock: The waste rock and overburden will be trucked via haul road to a waste rock storage facility (WRSF). Non-potentially acid generating and non-metal leaching waste rock and overburden will also be used as construction material.

Contact Water: contact water originating from developed areas will be intercepted and conveyed to various collection ponds for temporary storage. All contact water is eventually conveyed to surface water collection ponds (Collection Pond 1 and new ponds for the Extension). Contact water is routed through either the Effluent Water Treatment Plant (if required) and discharged to the receiving environment (Meliadine Lake). As described through the Waterline Project, the alternative will be to discharge surface contact water, and saline water, to Itivia Harbour through the waterline. At the Discovery site, contact and saline water will be discharged through the waterline. Treated water that is discharged to the receiving environment will meet criteria consistent with the Metal and Diamond Mine Effluent Regulations (MDMER) (for all receiving environments) and the Type A Water Licence (for discharge to Meliadine Lake).

Saline Water: saline water originating from the underground mines will be pumped to saline water collection ponds on the surface. All saline water will be eventually conveyed to the Saline Effluent Treatment Plant, where it will be treated for total suspended solids and ammonia discharged to the receiving environment (Itivia Harbour) through the waterline.

Infrastructure: The Project will construct an airstrip approximately 5 km east of the current operations. The camp capacity will be increased through an addition of 225 rooms. A windfarm consisting of 11 turbines (phased in over time) is proposed.

2.2 Description of Proposed Project Works

The Project Description and Alternatives, including Project Components and Activities is outlined in Section 2 of the Meliadine Extension FEIS Addendum.

The Meliadine Extension will begin as soon as approval and permits for the amendment applications are received, which are anticipated for mid-2022. The Extension of the operation phase (LOM) will be increased to 11 years, until 2043. Closure will occur in 2044 until 2046, with flooding ending in 2047-2050. Post-Closure Monitoring will take place in 2051 until 2060.

The Meliadine Extension allows the continuation of mining operations for the Approved Project that has existing and licensed waste and water management facilities. Consistent with the Approved Meliadine Mine, water management infrastructure includes: contact water collection ponds, waste rock storage facilities, diversion channels, retention dikes, and culverts. Salt rock storage facilities, wind turbines, waterline for salt water discharge, and an airstrip will be the newly added infrastructure associated with the Meliadine Extension.

Tailings will continue to be deposited in the approved TSF, authorized under Project Certificate No.006 and Type A Water Licence 2AM-MEL1631. The dry-stack TSF will be extended to accommodate additional tailings produced by the extension of the LOM. The footprint of the dry-stack will remain within the assessed and approved footprint of the original 2014 FEIS.

The originally proposed locations in the 2014 FEIS for ore storage at Meliadine were two large pads to the southeast of the Industrial Pad, encompassing numerous waterbodies in watersheds H and J (Agnico Eagle 2014). For the 2015 application for the Type A Water Licence, the locations of the proposed ore storage facilities moved closer to the Industrial Pad and primary crusher, with three smaller ore storage pads proposed instead of two large pads. Multiple changes were made to the configuration of various infrastructures within the Industrial Pad footprint since the 2015 application. As the general location of OP2 did not change, it was decided during detailed design of the facility to expand this originally planned footprint to incorporate the available remaining footprint of the previously planned OP1 and maximize the storage space next to the crusher during detailed design. For Meliadine Extension, this area will continue to be used.

For the Meliadine Extension, there will be new temporary ore stockpiles adjacent to the pits and portals at Pump, F Zone, Tiriganiaq-Wolf, and Discovery. The stockpiles are being added to facilitate ore handling and increases productivity of mine fleet which allows for more efficient equipment to transport the ore on a long distance (e.g., specific site to mill). Ore will be segregated by provenance and by ore grade. The ore will either be transported directly to the Approved mill and crusher for processing or will be temporally stockpiled at OP2. Contact water from the stockpiled ore material will be captured and redirected to the proper contact water collection pond.

Mining method includes the segregation of waste rock coming from the underground mines and open pits. Dedicated WRSFs were built to facilitate management of material coming from underground portions to keep it separate from open pit materials; additional WRSFs will be constructed as mining continues during the Meliadine Extension. Waste rock and overburden generated from open pit activities will be placed in one of the assessed WRSFs. Overall, the total WRSF surface area will be half the size indicated in the 2014 FEIS and will mostly remain within the 2014 FEIS footprint.

Approximately 191.6 Mt of waste rock will be mined from the open pits and underground mine operations, with the majority of the waste rock produced (about 174.6 Mt) to be placed and stored within the designated WRSFs. The remaining waste rock will be used for other purposes, including backfill to the underground mine, construction activities (including thermal protection and aggregate production to support the open pits), and as TSF closure cover material. Waste rock generated from the underground mining activities will be separated from the open pit waste rock. The underground waste rock will be temporarily stored in saline waste rock storage facilities on surface. Material from the saline WRSFs will be brought back underground throughout the mine life and completely removed from surface at the end of operations. The four saline WRSFs include:

- Saline WRSF1 – from Pump Underground;
- Saline WRSF2 – from F Zone Underground;
- Saline WRSF3 – from Discovery Underground; and
- Saline WRSF4 – from Tiriganiaq-Wolf Underground.

The general water management strategy is to limit surface flow entering the mine footprint and restrict uncontrolled surface contact water releases from the mine footprint to the environment to limit impacts on the receiving environment. In developing the water management plan, the following guiding principles were followed:

- segregate water as much as possible (non-contact, contact, and saline water);
- control and minimize contact water through diversion and containment;
- minimize or eliminate surface contact water discharges to Meliadine Lake as per Exhibit 23 of waterline hearing (NIRB Public Registry ID. 335793) and per Project Certificate No.006 Term and Condition 25;
- avoid placing collection ponds within overburden, site collection ponds within bedrock, or in lakes;
- minimize freshwater consumption by recycling and reusing the contact and process water wherever feasible; and
- meet discharge criteria before any site contact water is released to the receiving environment.

Saline ponds will be built at F Zone, Tiriganiaq-Wolf, Pump, and Discovery to collect and segregate water originating from underground mines. This water will be managed via the waterline. Contact water collection ponds (CPs) will be constructed to manage contact water from WRSF runoff and seepage as well as pit sump water.

Contact water will be treated for total suspended solids (TSS) in the Effluent Water Treatment Plant (EWTP) if required and discharged into Meliadine Lake. Saline water will be treated for ammonia (NH3) and TSS if required in the SETP prior to being conveyed to Rankin Inlet via waterline and discharged at Itivia Harbour through a diffuser.

Following completion of mining, the underground mines (Wesmeg, Pump, F Zone, Tiriganiaq-Wolf, and Discovery) will be flooded with contact water and saline water remaining at surface; the pits (Wesmeg, Pump, F Zone, Discovery) will be flooded by a combination of natural runoff and contact water from the site. Flooding will commence at the beginning of closure and will last seven years. During the closure and post-closure phases, the water management infrastructure will be decommissioned when the water quality monitoring results meet discharge criteria to allow water to passively flow to the natural environment.

Table 2.2-1 provides the proposed activities within the footprint of the following waterbodies.

Table 2.2-1: Potentially Affected Waterbodies and Associated Mitigations

Water-body	Dewatering of the waterbody (i.e., water extraction)	Fish out if required	Overburden stripping (i.e., vegetation clearing and soil clearing) using industrial equipment	Mining activities in new or expanded pit overprinting a portion of waterbody (i.e., use of explosives)	Construction of road using industrial equipment to allow access around the pits	If the waterbody is not fully excavated, water will be managed to avoid infiltration in the pits
A2	X	X	X	-	X	X
A2a	X	X	X	-	X	X
A3	X	X	X	-	X	X
A4	X	X	X	-	X	X
A5	X	X	X	X	X	X
A6	X	X	X	X	X	X
A7	X	X	X	-	X	X
A8	X	X	X	X	X	X
A19	X	X	X	X	X	X
A32	X	X	X	-	X	X
A34	X	X	X	-	X	X
A35	X	X	X	X	X	X
A37	X	X	X	X	X	X
A44	X	X	X	-	X	X
A45	X	X	X	-	X	X
A49	X	X	X	-	X	X
A50	X	X	X	X	X	X
A51	X	X	X	X	X	X
A52	X	X	X	-	X	X
A53	X	X	X	X	X	X
B4	X	X	X	-	X	X
B5	X	X	X	X	X	X
B6	X	X	X	-	X	X
B7	X	X	X	-	X	X
B19	X	X	X	-	X	X
B22	X	X	X	-	X	X

Water-body	Dewatering of the waterbody (i.e., water extraction)	Fish out if required	Overburden stripping (i.e., vegetation clearing and soil clearing) using industrial equipment	Mining activities in new or expanded pit overprinting a portion of waterbody (i.e., use of explosives)	Construction of road using industrial equipment to allow access around the pits	If the waterbody is not fully excavated, water will be managed to avoid infiltration in the pits
B25	X	X	X	-	X	X
B30	X	X	X	-	X	X
B31	X	X	X	-	X	X
B32	X	X	X	-	X	X
B34	X	X	X	-	X	X
B36	X	X	X	X	X	X
B37	X	X	X	X	X	X
B38	X	X	X	X	X	X
B39	X	X	X	-	X	X
B59	X	X	X	-	X	X
B60	X	X	X	-	X	X
B61	X	X	X	-	X	X
B62	X	X	X	X	X	X
B63	X	X	X	-	X	X
D31	X	X	X	-	X	X
H15e	X	X	X	-	X	X
I1	X	X	X	X	X	X
J2	X	X	X	-	X	X
J3	X	X	X	-	X	X
J4	X	X	X	-	X	X
J5	X	X	X	X	X	X
J6	X	X	X	X	X	X
J7	X	X	X	X	X	X
J8	X	X	X	-	X	X

2.3 Overview of Waterbodies Affected by Meliadine Extension

The Extension of Meliadine Mine will result in the loss of habitat from the development of Wesmeg, Normeg, Wolf, Pump, F Zone, and Discovery deposits. Open pit activities are already approved at the Pump, F-Zone, and Discovery deposits and do not currently affect the listed waterbodies and watercourses below. Figure 2.2-1 shows an overview of waterbodies affected by the mine infrastructure, and Table 2.2-2 and Table 2.2-3 provides location details. Further details are found in Section 4 of this report.

Table 2.2-2: Geographic Coordinates of Waterbodies Affected by Meliadine Extension

Water-body	Description	UTM Easting	UTM Northing	Effect of Meliadine Extension	Timeline for Proposed Work
A2	Pond	543409	6986180	Water quantity	2027
A2a	Pond	543437	6986188	Water quantity	2027
A3	Pond	543055	6986225	Water quantity	2027
A4	Pond	542972	6986211	Water quantity	2027
A5	Pond	542790	6986288	Overprinted by pit	2029
A6	Lake	541797	6985731	Overprinted by pit; Loss of downstream connectivity	2028
A7	Pond	540944	6986537	Loss of downstream connectivity; Water quantity	2028
A8	Lake	540402	6987170	Overprinted by pit and waste rock storage facility	2025
A19	Pond	542462	6986490	Overprinted by pit	2029
A32	Pond	541209	6986731	Loss of downstream connectivity	2029
A34	Pond	541389	6986827	Loss of downstream connectivity	2029
A35	Pond	540597	6987955	Overprinted by pit	2025
A37	Pond	540296	6987933	Overprinted by pit	2025
A44	Pond	541412	6985760	Loss of downstream connectivity	2027
A45	Pond	541265	6985695	Loss of downstream connectivity	2027
A49	Pond	541142	6985796	Loss of downstream connectivity	2027
A50	Pond	542558	6986190	Overprinted by pit	2029
A51	Pond	542561	6986081	Overprinted by pit	2029
A52	Lake	542766	6985866	Collection pond	2029
A53	Pond	542471	6986082	Overprinted by pit	2029
B4	Lake	538772	6986895	Collection pond	2025
B5	Lake	538007	6988529	Overprinted by pit	2024
B6	Lake	537779	6989168	Loss of downstream connectivity; Water quantity	2025
B7	Lake	537992	6989589	Saline pond	2025
B19	Pond	537629	6987622	Overprinted by infrastructure; Loss of downstream connectivity	2025
B22	Pond	537861	6987857	Loss of downstream connectivity	2025
B25	Pond	537347	6990239	Loss of downstream connectivity, TSF	2025
B30	Pond	538020	6988887	Loss of downstream connectivity	2025
B31	Pond	538109	6988805	Loss of downstream connectivity	2025
B32	Pond	538247	6988753	Overprinted by waste rock storage facility	2025
B34	Lake	539440	6987610	Overprinted by waste rock storage facility	2027
B36	Pond	539438	6986913	Overprinted by pit	2027
B37	Pond	539709	6986708	Overprinted by pit	2027
B38	Pond	539968	6986670	Overprinted by pit	2027
B39	Pond	538156	6986743	Loss of downstream connectivity	2027
B59	Lake	540168	6986236	Loss of downstream connectivity	2027

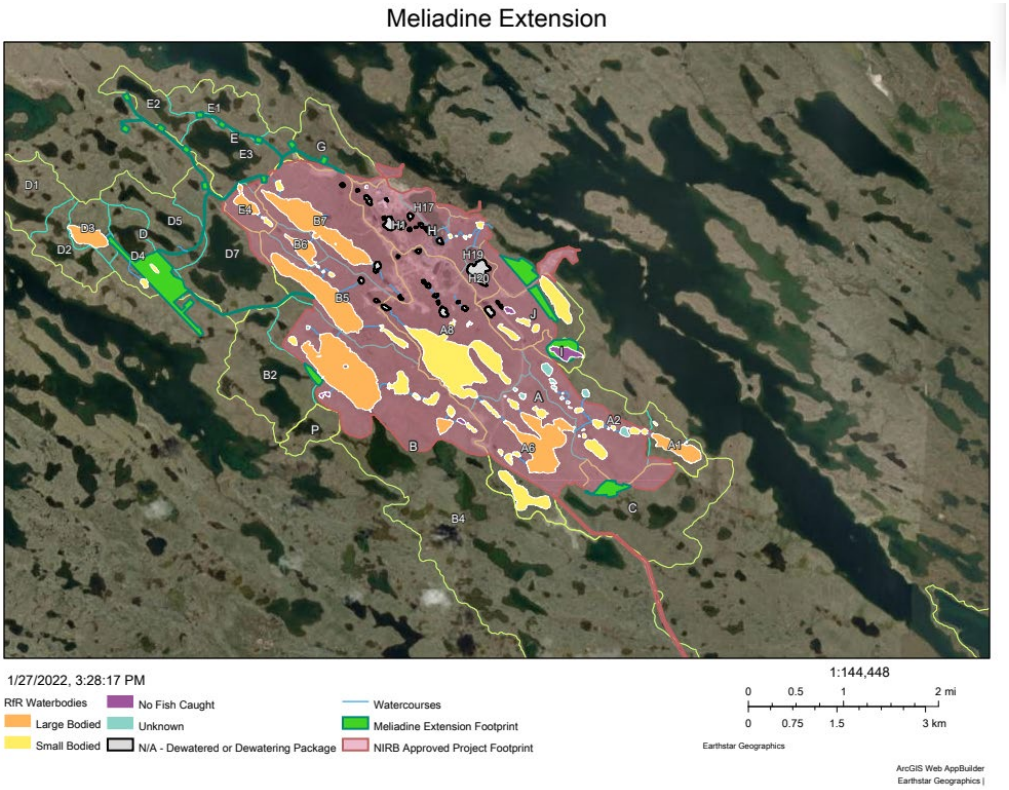
Water-body	Description	UTM Easting	UTM Northing	Effect of Meliadine Extension	Timeline for Proposed Work
B60	Pond	540479	6986300	Collection sump	2027
B61	Pond	540605	6986220	Overprinted by Salt Rock Pile	2027
B62	Pond	540297	6986468	Overprinted by pit	2027
B63	Pond	540420	6986380	Loss of downstream connectivity	2027
D31	Lake	535248	6988821	Overprinted by Ore stockpile	2029
H15e	Pond	538822	6990243	Loss of downstream connectivity	TBD
I1	Pond	542227	6987476	Overprinted by pit	2025
J2	Pond	541506	6988004	Overprinted by waste rock storage facility	2021
J3	Pond	541263	6988187	Overprinted by waste rock storage facility	2021
J4	Pond	541126	6988253	Loss of downstream connectivity	2025
J5	Pond	541068	6988319	Overprinted by pit	2025
J6	Pond	540933	6988163	Overprinted by pit	2025
J7	Pond	541263	6987807	Overprinted by pit	2025
J8	Pond	541714	6987891	Overprinted by waste rock storage facility	2025

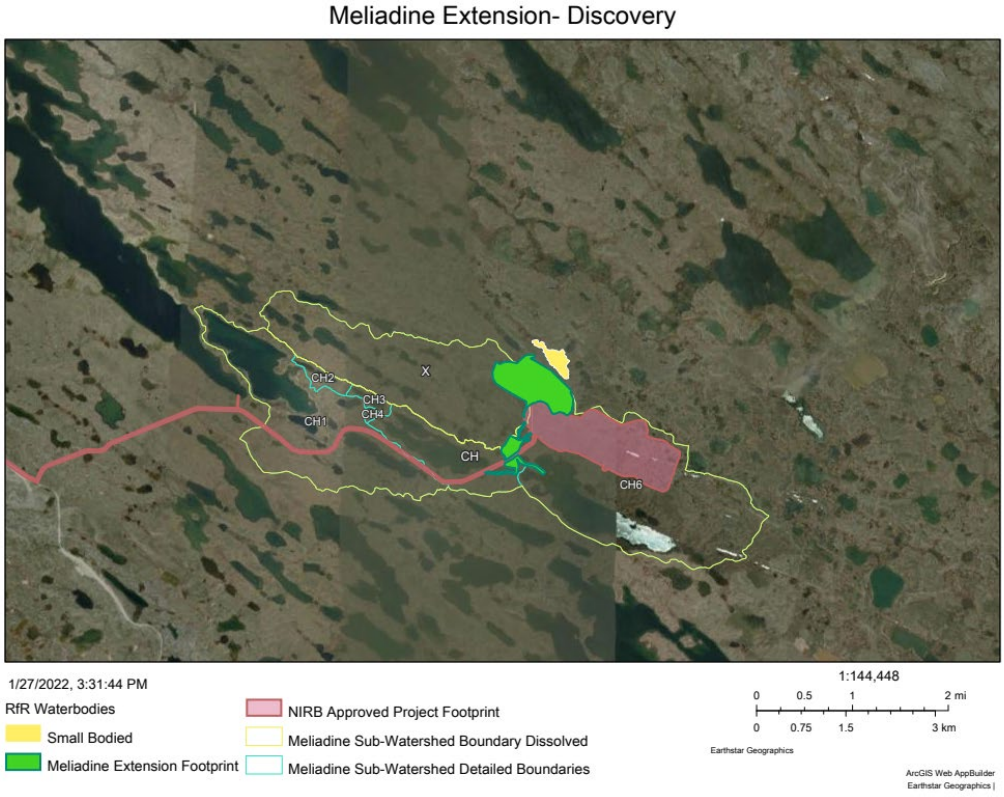
Table 2.2-3: Geographic Coordinates of Watercourses Affected by Meliadine Extension

Watercourse	Description	UTM Easting	UTM Northing	Effect of Meliadine Extension	Timeline for Proposed Work
A01-A02	Stream	543663	6986127	Water quantity	2027
A02A-A03	Stream	543128	6986181	Water quantity	2027
A03-A04	Stream	542999	6986218	Water quantity	2027
A04-A05	Stream	542904	6986230	Water quantity	2027
A05-A06	Stream	542579	6986291	Overprinted by pit	2028
A05-A19	Stream	542652	6986333	Water quantity	2028
A06-A07	Stream	541182	6986356	Loss of connectivity	2028
A06-A31	Stream	541454	6986501	Loss of connectivity; Water quantity	2028
A06-A44	Stream	541526	6985643	Loss of connectivity	2028
A07-A08	Stream	540790	6986664	Loss of connectivity; overprinted by pit	2028
A19-A20	Stream	542524	6986635	Overprinted by pit	2029
B03-B04	Stream	538026	6987063	Loss of connectivity; Water quantity	2025
B05-B06	Stream	537845	6988871	Water quantity	2024
B05-B31	Stream	538103	6988786	Loss of connectivity, overprinted by pit	2024
B05-B33	Stream, ephemeral overland flow, discontinuous	538722	6988623	Loss of connectivity due to pit	2024
B06-B30	Stream	537976	6988930	Loss of connectivity	2025

Watercourse	Description	UTM Easting	UTM Northing	Effect of Meliadine Extension	Timeline for Proposed Work
B26-B25	Stream, flat, overland flow	537258	6990353	Loss of connectivity	2025
B30-B31	Stream	538110	6988765	Loss of connectivity	2025
B36-B37	Stream	539591	6986766	Overprinted by pit	2027
B37-B38	Stream	539791	6986701	Overprinted by pit	2027
B04-B05	Stream	538264	6987776	Loss of connectivity, Collection Pond, Berm	2024
B04-B22	Stream	537985	6987792	Loss of connectivity, Collection Pond	2025
B04-B36	Stream	539120	6986908	Loss of connectivity, Collection Pond and pit	2025
B04-B39	Stream	538289	6986811	Loss of connectivity, Collection Pond	2025
B04-B45	Stream	538289	6986811	Loss of connectivity, Collection Pond	2025
B05-B34	Stream, flat, overland flow	539068	6987902	Loss of connectivity due to WRSF, vent raise	2024
B06-B07	Stream, flat, Connecting Channel	537928	6989387	Loss of connectivity, Collection Pond, dike	2025
B07-B08	Stream	537925	6989363	Loss of connectivity, Collection Pond, WRSF	2025
B07-B25	Stream, flat, overland flow	537355	6990154	Loss of connectivity, CP	2025
B07-B28	Stream	538142	6989759	Loss of connectivity, Collection Pond	2025
B08-B09	Stream	539087	6988764	Loss of connectivity, Collection Pond, WRSF	2025
B09-B10	Connecting Channel	539287	6988550	Loss of connectivity, Collection Pond, WRSF, pit	2025
B31-B32	Stream	538154	6988852	Overprinted by waste rock storage facility	2025
B59-B60	Stream	540367	6986296	Loss of connectivity, sumps	2027
B59-B62	Stream	540228	6986368	Overprinted by sump, vent raise	2027
B60- B61	Stream, flat, overland and subsurface flow	540562	6986250	Loss of connectivity, sump	2027
D04-D33	Stream	534831	6988916	Overprinted by infrastructure	2024
D05-D06	Stream	535703	6989176	Overprinted by infrastructure (road)	2024
H01-H19	Stream	540700	6989464	Infrastructure	TBD

Figure 2.2-1: Areas of Potentially Predicted Fish Habitat Loss





SECTION 3 • CONSULTATION

As per NIRB Project Certificate No.006, Agnico Eagle has continued to work in partnership with community members and Kivalliq Elders to establish a mutually beneficial, cooperative, and productive relationship. Our approach is characterized by effective two-way communication, consultation, and partnering.

Community and public engagement are planned in accordance with community relations best practices and existing guiding principles.

- Consultation should be part of an ongoing relationship between the Proponent of a project proposal and the communities that will be potentially affected by the proposed project, where mutual trust and understanding builds over time through a continuing process of discussions, decisions, and follow-through. Importantly, consultation generally takes place before a project proposal is developed and decisions are made regarding the project.
- Consultation is a two-way communication process, in which all parties listen and contribute views, information and ideas. The Proponent should communicate back to participants to confirm understanding of the information and to indicate any resulting effects of shared views, information and ideas.
- Consultation leads to action. It is an opportunity for genuine and respectful listening. This does not necessarily mean that every suggestion made in a consultation is implemented, but that input will always be taken into account.

Additionally, Agnico Eagle processes are designed to be aligned with Inuit Qaujimajatuqangit (IQ) guiding principles, including:

- **Fostering good spirit by being open, welcoming, and inclusive**: Agnico Eagle welcomes, and has sought, input to this Application through consultation and engagement with stakeholder groups in Rankin Inlet.
- **Decision-making through discussion and consensus**: Agnico Eagle facilitated discussion about this Application, and the balance of impacts and benefits, in consultation with stakeholders in Rankin Inlet. Ongoing discussions and dialogue are providing feedback to our mitigation and monitoring plans.
- **Working together for a common cause**: Through consultation with community stakeholders including Elders, land users, youth, women, and local government, Agnico Eagle has endeavored to work collaboratively with stakeholders to identify the best possible management plans.
- **Respect and care for the land, animals, and the environment**: Agnico Eagle is committed to developing Meliadine Extension in a way that will minimize impacts on land, animals, and the environment.

IQ encompasses not only Traditional Knowledge (TK) about land and resources, but also the skills to apply this knowledge to livelihoods, and a value system that is founded upon respect, sharing, collaboration, collective decision-making, skills development, and the responsible use of resources.

3.1 Previous Consultation Activities

Agnico Eagle acquired the Meliadine Project in July 2010 from Comaplex Mineral Corporation. Since that time, Agnico Eagle has actively engaged and consulted stakeholders throughout the Kivalliq region and adjacent jurisdictions. Public engagement and consultations efforts broadened in scope and frequency following the purchase.

As part of the 2014 FEIS, Agnico Eagle visited all Kivalliq communities and organized workshops and IQ interviews. Comments on the freshwater aquatic environment largely revolved around the fish in the small ponds to be lost during mining and what is to be done with them, and the need to protect the traditional use of fish from Meliadine Lake (for the complete list of concerns refer to the 2014 FEIS, SD 3-1 Public Engagement and Consultation Baseline Report, Agnico Eagle, April 2014).

Arctic Char, Lake Trout, and Arctic Grayling were identified as species of economic and cultural importance to traditional users in Nunavut, and representing important ecosystems processes (e.g., they are relatively abundant and occupy top trophic positions in their respective food web). Domestic fishing, on the other hand, is still an important part of the Inuit lifeway, accounting for as much as 20% of the diet of the residents of Rankin Inlet and Chesterfield Inlet. Most of the lakes in the Meliadine area are fished for Lake Trout and Arctic Char. Fishing for both Arctic Char and Arctic Grayling continue to be important to the people in the region. Ninespine Stickleback has not been identified as a species of interest. Additionally, the ponds identified in this application have not been identified by community members during the 2014 FEIS Consultation process as lakes that are being used for fishing.

3.2 2021 Consultation Activities

In 2021, Agnico Eagle validated with community members and Elders the following information collected as part of the 2014 FEIS as it relates to the freshwater aquatic environment:

- *We learned from the community that fishing for both Arctic char and grayling are important to people. There are remains of stone fishing weirs near the mouth of the Meliadine River, and stone drying racks scattered through the valley. ""Iqalugaarjuk"" translates as ""the river of little fishes,"" which refers to the grayling. Rectangular stone ""caches"" were used to store frozen char for winter use (Results of Inuit Qaujimajatuqangit interviews and focus groups held in Rankin Inlet, Chesterfield Inlet and Whale Cove for the FEIS 2015)."*
- *We heard from the community that Meliadine Lake is a good fishing spot in the late winter and springtime. Many people follow the winter road toward the Meliadine Camp and then follow snowmobile trails to the southeast end of the lake. There are many ice fishing holes made in Meliadine Lake in the spring (Results of Inuit Qaujimajatuqangit interviews and focus groups held in Rankin Inlet, Chesterfield Inlet and Whale Cove for the FEIS 2015).*
- *We heard from community consultation that Meliadine Lake is an important area (Elder's Group Meeting, March 2021).*

From our discussions with the community in 2021, we also heard that:

- People like to fish for Lake Trout, Arctic Char, and Arctic Grayling.

- People like to fish in lakes close to the community.
- Meliadine Lake and larger lakes are more important for fishing than smaller lakes.
- Meliadine Lake area is historically important, and still is considered as a special place for annual fish and caribou harvest.
- Char River used to have higher flows and elevation and was used more heavily by char for spawning. It would be interesting to rehabilitate this river.
- Women did, and still do, most of the fishing in the communities.
- Community members used to walk from Rankin Inlet to the area near Diane River to fish on the surrounding lakes. It would take all day. All fish at Meliadine go upstream to Peter Lake, and then go downstream to the ocean via Diane River. There are many Char at Josephine River Falls. Also, there are a lot of fish at Landing Lake.
- Fishing is practiced year-round. We heard from the community that Meliadine Lake is a good fishing spot in the late winter and springtime. Many people follow the winter road toward the Meliadine Camp and then follow snowmobile trails to the southeast end of the lake. There are many ice fishing holes made in Meliadine Lake in the spring. Additionally, we heard that summertime is generally a good season for fishing lake trout and spending time on the lake.
- There are a lot of fish at Landing Lake. There is first Landing Lake and second Landing Lake. It's called Landing Lake because float planes landed there. Fish species at this site include: Trout, Arctic Char, and Landlocked Char (half breed fish, does not go downstream). Meeting participants called Landlocked Char the beauty and the beast fish. Landlocked Char, fish that resembles an eel (the liver is a delicacy, and the meat makes a good broth), white fish (that do not go up/downstream), Grayling. The food fish eat affects the color of their flesh. As Arctic Char go up (upstream), they lose their red color, as they stop eating shrimp.
- The seasons are changing, and the streams are getting lower having an impact on fish. Some years are dry, and the water is low. Some years, the water is high when there is more rain. Fish have different sizes depending on the size of rocks in the streams and their location; they change accordingly. When the water becomes dirty, fish move somewhere else. The community fish using fishnets, and they have seen different species of fish they have not seen before.
- Fish meat is part of the weekly diet. Arctic char is stocked up during the summer and ice freeze up with gill net in the ocean or lakes. Fish is stored in catches for personal consumption and to feed dog team.

A number of examples of fish habitat offsetting options were presented to the community, to solicit feedback and generate discussion on new ideas that they may have:

- Fish Habitat Creation (lake or stream)
- Enhancement of Nipissar Lake
- Access Enhancement- reconnecting watercourses
- Turning mined-out pits into lakes
- Reclaiming lakes that were dewatered
- Arctic Char Hatchery

Fish Habitat Creation (lake or stream)

- Raise water level in a lake to make it larger (e.g., Nipissar Lake);
- Build rocky reefs in a lake to provide spawning habitat for fish; and
- Constructing channels in between existing or newly created lakes.

There is interest in the community for these options especially if large bodied fish habitat is enhanced as this is an important species. No location was identified by the community during engagement activities. Concerns were raised regarding building of infrastructures outside the already impacted footprint. Some community members preferred that offsetting options be within the existing mining footprint rather than in a pristine environment. Also, some community members shared that flooding land that has not been impacted to create new lakes or enhance existing lakes is counter to IQ values of protecting the land.

Access Enhancement

- Remove physical barriers to fish passage;
- Change habitat features (e.g., spawning pads); and
- Change water level and flows.

There is interest in the community for these options. Additional locations were identified by the community during engagement activities, but they are outside of the mine area and they would like to be initiated by the community. The Kivalliq Inuit Association (KivIA) showed interest in these options and more specifically for the rehabilitation of Nipissar Lake.

Concerns were raised regarding building of infrastructures outside the already impacted footprint. Some community members preferred that offsetting options be within the existing mining footprint rather than in a pristine environment. Also, some community members shared that flooding land that has not been impacted to create new lakes or enhance existing lakes is counter to IQ values of protecting the land.

Turning mined-out pits into lakes

- Reshape mined-out pits so they act like natural lakes and;
- Reconnection of open pit lake to natural lake to let fish in.

There is great interest from the community for this option as this would not result in impacting other areas outside the existing mine footprint. However, this will only be possible once mining of the pits is completed.

3.3 Consultation with KivIA

Agnico Eagle established a Fisheries Committee (FC) with the KivIA in February 2022 to support ongoing cooperation and communication amongst both parties regarding fish and fish habitat and potential effects from the Meliadine Extension. The objective of the FC is to review and provide advice to Agnico Eagle on aspects of fish and fish habitat in relation to offsetting opportunities by:

- Facilitating consultation of local community groups to evaluate offsetting options and gather local feedback;
- Play an important public relations role as well as providing the FC with differing perspectives on fish offsetting issues and concerns.
- Explore further studies related to offsetting in the arctic;
- Consider fish habitat enhancements that have been previously suggested and approved by DFO;
- Make recommendations and/or provide key information in the development of the offsetting plan;
- Create a northern approach to managing fish and fish habitat; and
- Work to build capacity for local youth e.g.: training and work experience opportunities.

Field reconnaissance at the proposed offsetting locations will be completed in the summer 2022 to provide a further understanding of the fish habitat and to gather additional information for future offsetting.

SECTION 4 • DESCRIPTION OF FISH AND FISH HABITAT

The Meliadine Mine, including the ponds identified in this plan is situated in the headwaters of the A and B watersheds. The A and B watersheds have respectively a drainage area of 9 and 23 km^2. These two watersheds drain into Meliadine Lake. Meliadine Lake has a water surface area of approximately 107 km^2, a maximum length of 31 km, features a highly convoluted shoreline of 465 km, and has over 200 islands. Unlike most lakes, it has two outflows that drain into Hudson Bay through two separate river systems. It has a drainage area of 560 km^2 upstream of its two outflows. Most drainage occurs via the Meliadine River, which originates at the southwest end of the lake. The Meliadine River flows for a total stream distance of 39 km. The Meliadine River flows through a series of waterbodies, until it reaches Little Meliadine Lake and then continues into Hudson Bay. A second, smaller outflow from the west basin of Meliadine Lake drains into Peter Lake, which discharges into Hudson Bay through the Diane River system (a stream distance of 70 km). At its mouth, the Diane River has a drainage area of 1,460 km^2.

The study area is located on the Canadian Shield within a Low Arctic ecoclimate of continuous permafrost and is one of the coldest and driest regions of Canada.

The lakes within the Meliadine Mine are ultra-oligotrophic/oligotrophic (nutrient poor, unproductive) headwater lakes that are typical of the Arctic. The ice-free season on the lakes is very short. Ice break-up usually begins during mid- to late-June, with the lakes becoming ice-free in early July. Ice begins to form again on the lakes in late September or early October. Complete ice cover is attained by late October, with maximum ice thickness of about 2m occurring in March/April. Many small watercourses become dry once the land begins to freeze in the fall and, where water is present, most freeze to the bottom during the winter. Flows during the spring melt and the summer vary with drainage area.

The fish community and habitat of the affected areas are well-studied. Baseline fisheries investigations in support of the Meliadine Mine were completed in the peninsula lakes (which include ponds in the A and B watersheds) and Meliadine Lake in support of the 2014 FEIS. Additional fish sampling was conducted in the Meliadine Mine in 2020 and 2021, in support of plans for Meliadine Extension. The 2020 and 2021 field investigations generally corroborated the earlier findings.

Fish communities in 52 waterbodies were assessed during the 2020-2021 field programs. Large-bodied fish communities were assessed using sinking gillnets and angling. A total of 66 gillnet sets were conducted at ten waterbodies amounting to a total of 58.7 h of gillnetting effort. Small-bodied fish communities were assessed using a backpack electrofisher, minnow traps, and drift nets. A total of 660 minnow traps were deployed at 43 waterbodies, resulting in a total of 14,699 h of minnow trapping effort. A total of 40,541 seconds of electrofishing effort was exerted at 44 waterbodies. A total of 13 drift nets were deployed at eight streams sites, amounting to a total of 229.73 h of drift netting effort.

This fishing effort resulted in the capture of 2,917 fish (not including fish captured by drift netting) from surveyed waterbodies. A total of seven species were identified within the waterbodies surveyed, including Arctic Char, Arctic Grayling, Cisco, Ninespine Stickleback, Threespine Stickleback, Slimy Sculpin, and

Burbot. Across all waterbodies, Ninespine Stickleback were the most prevalent (95.6%) followed by Threespine Stickleback (2.3%), and Arctic Grayling (1.5%). Slimy Sculpin, Burbot, Cisco, and Arctic Char each comprised < 1% of the total catch (not including fish captured by drift netting).

Species diversity was highest in A1 in which five species were captured, followed by A6 and B7, in which four species were captured. Ninespine Stickleback were the most widespread species, followed by Arctic Grayling. Arctic Char distribution was limited and mainly confined to areas close to Meliadine Lake (i.e., A1). However, one Arctic Char was captured at A6, suggesting that given suitable conditions, Arctic Char may periodically migrate further upstream.

Overall, the 2020-2021 survey results are generally consistent with those presented in previous baseline aquatic resources studies (Golder 2012, 2014), with some exceptions. Ninespine Stickleback were captured in six waterbodies (i.e., A19, A3, A4, A50, A9, B61) in which no fish had previously been captured, and in four waterbodies which had not been previously sampled (i.e., E5, D31, D33, W1). One Cisco was captured in E4, a waterbody in which this species had not been previously captured. Slimy Sculpin were captured in three waterbodies (i.e., A6, A8, B6) in which they had not been previously captured. Ninespine Stickleback were captured in three waterbodies (i.e., A8, B5, B6) which had not been previously sampled using methods that target small bodied fish species (i.e., minnow trapping, electrofishing).

Approximately 35,604 fish were captured across eight streams sampled using drift nets. Ninespine Stickleback made up approximately 99% of the catch. Threespine Stickleback and Arctic Grayling each comprised < 1% of the total catch. Arctic Grayling captured in drift nets deployed at A50-A5, A1-MEL, and B4-B2 indicates that juvenile Arctic Grayling utilize these stream sections as rearing and migratory habitats. The high abundance and wide distribution of Ninespine Stickleback in stream sections within the A-Chain and B-Chain suggests that small, ephemeral streams provide important migratory habitat for all life stages of Ninespine Stickleback, which may have a large contribution to downstream productivity for larger-bodied species.

Table 4.1-1: Fish Species Observed in Waterbodies and Watercourses

Site	Sampling Method	No. of Sampling Events	Year	Sampling Effort	Fish Captured										
					ARCH	LKTR	ARGR	RNWH	CISC	BURB	SLSC	NSSB	TSSB	Total	Total CPUE
Lake A1	AL	1	1997	0.5 rod-h										0	0 fish/rod-h
Lake A1	GN	2	1997	0.42 net-units				1						1	2.40 fish/net-unit
Lake A1	GN	3	1997	1.94 net-units	4	4			1					9	4.65 fish/net-unit
Lake A1	FN	1	2011	24.0 h			1					7	9	17	0.71 fish/h
Lake A1	GN	1	2011	0.76 net-units	1	3		1						5	6.58 fish/net-unit
Lake A1	MT	1	2011	71.1 trap-h										0	0 fish/24h
Lake A1	EF	1	2020	1370.8 s								35		35	2.55 fish/100s
Lake A1	GN	7	2020	6.5 (dec. h)	2		1		1					4	0.71 (fish/100 m^2/h)
Lake A1	AL	1	2020	0.3 (dec. h)										0	0 (fish/rod/hour)
Lake A1	AL	2	2020	0.9 (dec. h)										0	0 (fish/rod/hour)
Lake A1	AL	2	2020	0.4 (dec. h)										0	0 (fish/rod/hour)
Lake A1	AL	2	2020	0.4 (dec. h)										0	0 (fish/rod/hour)
Lake A1	AL	2	2020	1.2 (dec. h)										0	0 (fish/rod/hour)
Lake A1	MT	1	2020	1312.60 (dec. h)								8	27	35	0.64 (# fish per trap per 24 h)
Stream A1-2	EF	1	1997	324 s	1	1	8					33	2	45	8.33 fish/min
Stream A1-2	EF	1	1998	177 s			2							2	0.68 fish/min
Pond A2	AL	1	1997	0.5 rod-h										0	0 fish/rod-h
Pond A2	FN	1	2011	26.1 h								59	25	84	3.22 fish/h
Pond A2	MT	1	2011	76.3 trap-h								5	5	10	3.15 fish/24h
Pond A2	EF	1	2020	1643.7 s								141	1	142	8.64 fish/100s
Pond A2	MT	1	2020	652.52 (dec. h)								193	39	232	8.65 (# fish per trap per 24 h)
Pond A2A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream A02A-A03	EF	1	1997	320 s		1	12					5		18	3.38 fish/min
Stream A02A-A03	EF	1	1998	174 s			9							9	3.10 fish/min
Stream A02A-A03	EF	1	1998	304 s	1	1	6				1	5	4	18	3.55 fish/min
Stream A02A-A03	EF	1	1998	230 s		1	20					5	3	29	7.57 fish/min
Pond A3	MT	1	2012	99.4 trap-h										0	0 fish/24h
Pond A3	EF	1	2020	325.1 s								45		45	13.84 fish/100s
Pond A3	MT	1	2020	227.72 (dec. h)								18		18	1.91 (# fish per trap per 24 h)
Stream A3-4	EF	1	1997	135 s			1					2		3	1.33 fish/min
Stream A3-4	EF	1	1998	109 s			1							1	0.55 fish/min
Pond A4	MT	1	2012	52.7 trap-h										0	0 fish/24h
Pond A4	EF	1	2020	371.5 s								5		5	1.35 fish/100a
Pond A4	MT	1	2020	93.2 (dec. h)								13		13	3.35 (# fish per trap per 24 h)
Stream A4-5	EF	1	1997	411 s			14					4		18	2.63 fish/min
Stream A4-5	EF	1	1998	320 s			3							3	0.56 fish/min
Pond A5	AL	1	1997	0.5 rod-h										0	0 fish/rod-h
Pond A5	EF	1	2009	596 s								3		3	0.30 fish/min
Pond A5	MT	1	2009	120.0 trap-h								4		4	0.80 fish/24h
Pond A5	EF	1	2020	345.8 s								33		33	9.54 fish/100s
Pond A5	MT	1	2020	387.6 (dec. h)								34		34	2.11 (# fish per trap per 24 h)

Site	Sampling Method	No. of Sampling Events	Year	Sampling Effort	Fish Captured										
					ARCH	LKTR	ARGR	RNWH	CISC	BURB	SLSC	NSSB	TSSB	Total	Total CPUE
Stream A5-6	EF	1	1997	800 s			13					80		93	6.98 fish/min
Stream A5-6	EF	1	1997	461 s		8					9	29		46	5.99 fish/min
Stream A5-6	EF	3	1998	2008 s			23					19		42	1.25 fish/min
Stream A5-6	EF	1	1998	540 s	1	4	11					7		23	2.56 fish/min
Stream A5-6	EF	1	1998	315 s			16					5	1	22	4.19 fish/min
Stream A5-6	EF	1	2009	648 s			10				9	53	2	74	6.85 fish/min
Stream A5-A19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake A6	FN	2	2009	41.3 h			193					4	1	198	4.80 fish/h
Lake A6	GN	1	2009	0.42 net-units			8		1					9	21.60 fish/net-unit
Lake A6	GN	1	1997	0.46 net-units			1		2					3	6.55 fish/net-unit
Lake A6	GN	2	1998	0.83 net-units			4		1					5	6.00 fish/net-unit
Lake A6	GN	1	2009	0.54 net-units			5							5	9.23 fish/net-unit
Lake A6	MT	3	2009	235.8 trap-h								1		1	0.10 fish/24h
Lake A6	EF	1	2020	683.5 s							1	43		44	6.44 fish/100s
Lake A6	MT	1	2020	296.7 (dec. h)								42		42	3.40 (# fish per trap per 24 h)
Lake A6	AL	2	2020	0.6 (dec. h)										0	0 (fish/rod/hour)
Lake A6	AL	2	2020	0.4 (dec. h)										0	0 (fish/rod/hour)
Lake A6	GN	14	2020	14.35 (dec. h)	1		5							6	0.58 (fish/100 m²/h)
Stream A6-7	EF	1	2009	829 s			17				6	5		28	2.03 fish/min
Stream A6-7	EF	1	2009	313 s							4	2		6	1.15 fish/min
Stream A6-7	EF	1	1998	624 s			4				2	1		7	0.67 fish/min
Stream A6-7	EF	1	2000	640 s							1	3		4	0.38 fish/min
Stream A6-7	EF	1	2000	450 s							5	8		13	1.73 fish/min
Stream A6-7	EF	1	2000	533 s			1				1	26		28	3.15 fish/min
Stream A6-7	EF	1	2008	409 s			1				3	18		22	3.23 fish/min
Stream A6-7	EF	1	1997	829 s			17				6	5		28	2.03 fish/min
Stream A6-7	EF	1	1997	313 s							4	2		6	1.15 fish/min
Stream A6-A31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream A6-A44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond A7	MT	1	2011	142.7 trap-h								257		257	43.22 fish/24h
Stream A7-8	EF	1	1997	345 s			4				2	10		16	2.78 fish/min
Stream A7-8	EF	1	1997	203 s								8		8	2.36 fish/min
Stream A7-8	EF	2	1998	1971 s							1	30		31	0.94 fish/min
Stream A7-8	EF	1	1998	300 s			1					12		13	2.60 fish/min
Stream A7-8	EF	1	1998	125 s			1					7		8	3.84 fish/min
Lake A8	GN	3	1997	1.10 net-units			14							14	12.68 fish/net-unit
Lake A8	GN	1	1997	0.58 net-units			4							4	6.86 fish/net-unit
Lake A8	GN	2	1998	0.96 net-units			1							1	1.04 fish/net-unit
Lake A8	EF	1	2020	1137.4 s							1	44		45	3.96 fish/100s
Lake A8	MT	1	2020	310.55 (dec. h)								344		344	26.50 (# fish per trap per 24 h)
Lake A8	GN	11	2020	7.47 (dec. h)			18							18	3.16 (fish/100 m²/h)
Lake A8	AL	2	2020	0.4 (dec. h)										0	0 (fish/rod/hour)

Site	Sampling Method	No. of Sampling Events	Year	Sampling Effort	Fish Captured										
					ARCH	LKTR	ARGR	RNWH	CISC	BURB	SLSC	NSSB	TSSB	Total	Total CPUE
Lake A8	AL	2	2020	0.3 (dec. h)										0	0 (fish/rod/hour)
Lake A8	AL	2	2020	0.5 (dec. h)										0	0 (fish/rod/hour)
Lake A8	AL	2	2020	0.4 (dec. h)										0	0 (fish/rod/hour)
Lake A8	AL	2	2020	0.5 (dec. h)										0	0 (fish/rod/hour)
Pond A19	MT	1	2012	186.5 trap-h										0	0 fish/24h
Pond A19	EF	1	2020	727.1 s								16		16	2.2 fish/100s
Pond A19	MT	1	2020	212.80 (dec. h)								4		4	0.45 (# fish per trap per 24 h)
Stream A19-A20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond A32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond A34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond A35	EF	1	2008	127 s										0	0 fish/min
Pond A37	EF	1	2008	126 s								1		1	0.48 fish/min
Pond A44	MT	1	2011	22.4 trap-h								1		1	1.07 fish/24h
Pond A45	MT	1	2011	22.7 trap-h								23		23	24.32 fish/24h
Pond A49	MT	1	2011	22.6 trap-h								1		1	1.06 fish/24h
Pond A50	EF	1	2009	120 s										0	0 fish/min
Pond A50	MT	1	2009	20.3 trap-h										0	0 fish/24h
Pond A50	EF	1	2020	338.8 s								22		22	6.49 fish/100s
Pond A50	MT	1	2020	125.9 (dec. h)								113		113	21.56 (# fish per trap per 24 h)
Pond A51	EF	1	2009	273 s								2		2	0.44 fish/min
Pond A51	MT	1	2009	41.5 trap-h										0	0 fish/24h
Pond A51	EF	1	2020	639.5 s								27		27	4.22 fish/100s
Pond A51	MT	1	2020	279.4 (dec. h)								84		84	7.15 (# fish per trap per 24 h)
Pond A52	FN	2	2008	46.3 h								556		556	12.02 fish/h
Pond A52	GN	1	2008	3.28 net-units										0	0 fish/net-unit
Pond A52	MT	1	2008	144.0 trap-h										0	0 fish/24h
Pond A52	EF	1	2020	554.8 s								33		33	5.95 fish/100s
Pond A52	MT	1	2020	586.3 (dec. h)								108		108	4.48 (# fish per trap per 24 h)
Pond A53	EF	1	2009	133 s								11		11	4.96 fish/min
Pond A53	MT	1	2009	21.0 trap-h								2		2	2.29 fish/24h
Stream B03-B04	EF	1	1997	1025 s			10			2	1	10		23	1.35 fish/min
Stream B03-B04	EF	1	1997	605 s	1	2	3			4	15	2		27	2.68 fish/min
Stream B03-B04	EF	1	1997	141 s			2							2	0.85 fish/min
Stream B03-B04	EF	3	1998	2500 s			14					12		26	0.62 fish/min
Stream B03-B04	EF	1	1998	693 s	1	1	13			3		1		19	1.65 fish/min
Stream B03-B04	EF	1	1998	280 s			4				1	3		8	1.71 fish/min
Lake B4	AL	1	1997	0.5 rod-h										0	0 fish/rod-h
Lake B4	GN	3	1997	1.65 net-units										0	0 fish/net-unit
Lake B4	GN	2	1998	1.13 net-units										0	0 fish/net-unit
Lake B4	FN	1	2011	16.3 h			1					19		20	1.23 fish/h
Lake B4	MT	1	2011	50.1 trap-h								2		2	0.96 fish/24h
Lake B4	EF	1	2020	1405.2 s			1					9		10	0.71 fish/100s

Site	Sampling Method	No. of Sampling Events	Year	Sampling Effort	Fish Captured										
					ARCH	LKTR	ARGR	RNWH	CISC	BURB	SLSC	NSSB	TSSB	Total	Total CPUE
Lake B4	MT	1	2020	844.1 (dec. h)								108		108	2.86 (# fish per trap per 24 h)
Lake B4	GN	3	2020	3.2 (dec. h)			1							1	0.41(fish/100 m²/h)
Lake B4	AL	2	2020	0.7 (dec. h)										0	0 (fish/rod/hour)
Lake B4	AL	2	2020	0.9 (dec. h)										0	0 (fish/rod/hour)
Stream B4-B5	EF	1	1997	310 s								19		19	3.68 fish/min
Stream B4-B5	EF	1	1997	471 s			5				5	32		42	5.35 fish/min
Stream B4-B5	EF	1	1997	164 s			1				1	12		14	5.12 fish/min
Stream B4-B5	EF	2	1998	852 s							2	16		18	1.27 fish/min
Stream B4-B5	EF	1	1998	400 s			2			1	1	7		11	1.65 fish/min
Stream B4-B5	EF	1	1998	215 s			7					3		10	2.79 fish/min
Stream B4-B5	DN	1	2020	0	-	-	-	-	-	-	-	-	-	0	0
Stream B4-B22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream B4-B36	EF	1	1997	296 s								343		343	69.53 fish/min
Stream B4-B39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream B4-B45	EF	1	1997	172 s								6		6	2.09 fish/min
Stream B4-B44	EF	1	2011	634 s								3		3	0.28 fish/min
Lake B5	AL	2	1997	1.0 rod-h										0	0 fish/rod-h
Lake B5	AL	1	1997	0.5 rod-h			1							1	2.00 fish/rod-h
Lake B5	GN	1	1997	0.31 net-units			9							9	28.80 fish/net-unit
Lake B5	GN	1	1997	0.63 net-units			4							4	6.40 fish/net-unit
Lake B5	GN	1	1998	1.27 net-units			14							14	11.02 fish/net-unit
Lake B5	GN	1	1998	7.13 net-units			11			1				12	1.68 fish/net-unit
Lake B5	FD	1	1998	-						1				1	-
Lake B5	EF	1	2020	1621.8 s			1					6		7	0.43 fish/100s
Lake B5	MT	1	2020	751.2 (dec. h)			1					99		100	3.20 (# fish per trap per 24 h)
Lake B5	GN	5	2020	4.2 (dec. h)			3							3	0.92 (fish/100 m²/h)
Lake B5	AL	1	2020	0.2 (dec. h)										0	0 (fish/rod/hour)
Lake B5	AL	2	2020	0.3 (dec. h)										0	0 (fish/rod/hour)
Lake B5	AL	2	2020	0.8 (dec. h)										0	0 (fish/rod/hour)
Lake B5	AL	2	2020	0.6 (dec. h)										0	0 (fish/rod/hour)
Stream B5-B6	EF	1	1997	276 s							1	34		35	7.61 fish/min
Stream B5-B6	EF	1	1997	248 s			19					21		40	9.68 fish/min
Stream B5-B6	EF	2	1998	1103 s			1					24		25	1.36 fish/min
Stream B5-B6	EF	1	1998	220 s			11				1	8		20	5.45 fish/min
Stream B5-B6	EF	1	1998	184 s			2							2	0.65 fish/min
Stream B5-B31	DN	2	2020	-	-	-	-	-	-	-	-	-	-	0	0
Stream B5-B31	EF	1	2011	474 s			2				1	13		16	2.03 fish/min
Stream B5-B31	DN	2	2020	47.3 (dec. h)								1		1	0.001 (no. fish/m³ of water filtered)
Stream B5-B33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream B5-B34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake B6	AL	1	1997	1.0 rod-h			2							2	2.00 fish/rod-h
Lake B6	FN	1	2008	22.5 h			1		3			6		10	0.44 fish/h

Site	Sampling Method	No. of Sampling Events	Year	Sampling Effort	Fish Captured										
					ARCH	LKTR	ARGR	RNWH	CISC	BURB	SLSC	NSSB	TSSB	Total	Total CPUE
Lake B6	FN	1	2008	21.0 h										0	0 fish/h
Lake B6	EF	1	2020	830.2 s							6	4		10	1.2 fish/100s
Lake B6	MT	1	2020	710.7 (dec. h)								38		38	1.28 (# fish per trap per 24 h)
Stream B6-B7	DN	2	2020	47.98 (dec. h)	-	-	-	-	-	-	-	-	-	0	0 (no. fish/m³ of water filtered)
Stream B6-B7	EF	1	1997	543 s			8				1	4		13	1.44 fish/min
Stream B6-B7	EF	1	1997	162 s			26					4		30	11.11 fish/min
Stream B6-B7	EF	1	1997	115 s			1					3		4	2.09 fish/min
Stream B6-B7	EF	1	1998	971 s						2	2	13		17	1.05 fish/min
Stream B6-B7	EF	1	1998	466 s			3					1		4	0.52 fish/min
Stream B6-B7	EF	1	1998	438 s			8				6	6		20	2.74 fish/min
Stream B6-B7	EF	1	1998	304 s			8				2			10	1.97 fish/min
Stream B6-B30	DN	2	2020	46.75 (dec. h)	-	-	-	-	-	-	-	-	-	0	0 (no. fish/m³ of water filtered)
Lake B7	AL	1	1997	1.0 rod-h			3							3	3.00 fish/rod-h
Lake B7	AL	1	1997	0.8 rod-h			2							2	2.67 fish/rod-h
Lake B7	AL	1	1998	5.0 rod-h										0	0 fish/rod-h
Lake B7	FD	1	1998	-						1				1	-
Lake B7	FN	4	2008	75.0 h			215			1		4		220	2.93 fish/h
Lake B7	FN	3	2008	63.5 h			77		6	1				84	1.32 fish/h
Lake B7	GN	1	1997	0.54 net-units			3		1					4	7.38 fish/net-unit
Lake B7	GN	1	1997	0.63 net-units					4					4	6.40 fish/net-unit
Lake B7	GN	2	1998	1.08 net-units			4		2					6	5.54 fish/net-unit
Lake B7	GN	11	1998	7.55 net-units			3		9					12	1.59 fish/net-unit
Lake B7	GN	5	2008	1.48 net-units			10		13					23	15.55 fish/net-unit
Lake B7	EF	1	2020	942.3 s						1		3		4	0.42 fish/100s
Lake B7	MT	1	2020	467.5 (dec. h)								284		284	14.43 (# fish per trap per 24 h)
Lake B7	GN	3	2020	1.0 (dec. h)			10		3					13	15.31 (fish/100 m²/h)
Lake B7	AL	2	2020	0.2 (dec. h)			1							1	4.00 (fish/rod/hour)
Lake B7	AL	1	2020	0.2 (dec. h)										0	0.00 (fish/rod/hour)
Stream B7-B8	EF	1	1998	348 s								1		1	0.17 fish/min
Stream B7-B25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream B7-B28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream B8-B9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream B9-B10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond B19	OB	1	2012	-								2		2	-
Pond B22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond B25	EF	1	2009	481 s								3		3	0.37 fish/min
Pond B25	MT	1	2009	73.5 trap-h										0	0 fish/24h
Pond B25	EF	1	2020	1587.7 s								11		11	0.69 fish/100s
Pond B25	MT	1	2020	438.2 (dec. h)								26		26	1.43 (# fish per trap per 24 h)
Stream B26-B25	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Pond B30	EF	1	2008	156 s								10		10	3.85 fish/min
Pond B30	MT	1	2008	44.2 trap-h								4		4	2.17 fish/24h

Site	Sampling Method	No. of Sampling Events	Year	Sampling Effort	Fish Captured										
					ARCH	LKTR	ARGR	RNWH	CISC	BURB	SLSC	NSSB	TSSB	Total	Total CPUE
Pond B30	EF	1	2011	140 s								3		3	1.29 fish/min
Pond B30	MT	1	2011	11.8 trap-h								20		20	40.68 fish/24h
Pond B30	EF	1	2020	366.7 s								5		5	1.36 fish/100s
Pond B30	MT	1	2020	115.3 (dec. h)										0	0 (# fish per trap per 24 h)
Stream B30-B31	EF	1	2011	460 s			2					2		4	0.52 fish/min
Stream B30-B31	MT	1	2011	5.4 trap-h								5		5	22.22 fish/24h
Pond B31	EF	1	2008	125 s								25		25	12.00 fish/min
Pond B31	MT	1	2008	44.2 trap-h								2		2	1.09 fish/24h
Pond B31	EF	1	2020	658.2 s								14		14	2.13 fish/100s
Pond B31	MT	1	2020	178.6 (dec. h)								2		2	0.27 (# fish per trap per 24 h)
Stream B31-B32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond B32	EF	1	2011	302 s								1		1	0.20 fish/min
Pond B32	EF	1	2008	294 s										0	0 fish/min
Pond B32	MT	1	2008	43.5 trap-h								1		1	0.55 fish/24h
Pond B32	MT	1	2020	325.8 (dec. h)								10		10	0.73 (# fish per trap per 24 h)
Pond B32	EF	1	2020	603.7 s								30		30	4.97 fish/100s
Lake B34	FN	1	2011	16.4 h								282		282	17.20 fish/h
Lake B34	GN	1	2011	0.13 net-units										0	0 fish/net-unit
Lake B34	MT	1	2011	50.1 trap-h								56		56	26.83 fish/24h
Lake B34	EF	1	2020	568.7 s								28		28	4.92 fish/100s
Lake B34	GN	4	2020	4.37 (dec. h)										0	0 (fish/100 m²/h)
Lake B34	MT	1	2020	378.3 (dec. h)								47		47	2.97 (# fish per trap per 24 h)
Lake B34	AL	2	2020	0.83 (dec. h)										0	0 (fish/rod/hour)
Pond B36	EF	1	2011	517 s								5		5	0.58 fish/min
Pond B36	MT	1	2011	50.4 trap-h								138		138	65.71 fish/24h
Pond B36	EF	1	2020	879.6 s								16		16	1.82 fish/100s
Pond B36	MT	1	2020	176.7 (dec. h)								9		9	1.22 (# fish per trap per 24 h)
Stream B36-B37	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Pond B37	OB	1	2011	-								8		8	-
Pond B37	EF	1	2020	1266.7 s								7		7	0.55 fish/100s
Pond B37	MT	1	2020	178.6 (dec. h)								3		3	0.40 (# fish per trap per 24 h)
Stream B37-B38	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Pond B38	OB	1	2011	- -								20		20	- -
Pond B38	EF	1	2020	1295.2 s								8		8	0.62 fish/100s
Pond B38	MT	1	2020	180.9 (dec. h)								5		5	0.66 (# fish per trap per 24 h)
Pond B39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake B59	MT	1	2012	68.9 trap-h										0	0 fish/24h
Lake B59	OB	1	2012	-			2							2	-
Stream B59-B60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream B59-B62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake B60	MT	1	2012	103.2 trap-h										0	0 fish/24h
Lake B60	EF	1	2020	1601.6 s										0	0 fish/100s

Site	Sampling Method	No. of Sampling Events	Year	Sampling Effort	Fish Captured										
					ARCH	LKTR	ARGR	RNWH	CISC	BURB	SLSC	NSSB	TSSB	Total	Total CPUE
Lake B60	MT	1	2020	303.2 (dec. h)										0	0 (# fish per trap per 24 h)
Stream B60-B61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond B61	MT	1	2012	121.5 trap-h										0	0 fish/24h
Pond B61	EF	1	2020	1561.3 s										0	0 fish/100s
Pond B61	MT	1	2020	305.2 (dec. h)								1		1	0.08 (# fish per trap per 24 h)
Pond B62	MT	1	2012	81.1 trap-h										0	0 fish/24h
Pond B62	OB	1	2011	-								15		15	-
Pond B62	OB	1	2012	-								1		1	-
Pond B62	EF	1	2020	1693.7 s								16		16	0.94 fish/100s
Pond B62	MT	1	2020	498.1 (dec. h)								30		30	1.44 (# fish per trap per 24 h)
Pond B63	EF	1	2020									2		2	0.65 fish/100s
Pond D31	EF	1	2021	1741.9 s										0	0 fish/100s
Pond D31	MT	1	2021	569.8 (dec. h)								1		1	0.04 (# fish per trap per 24 h)
Stream D4-D33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stream D5-D6	EF	1	1997	415 s								28		28	4.05 fish/min
Stream D5-D6	EF	1	1997	296 s								343		343	69.53 fish/min
Stream H1-H19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pond H15e	EF	1	2009	192 s										0	0 fish/min
Pond H15e	MT	1	2009	60.0 trap-h										0	0 fish/24h
Pond I1	FN	1	2012	15.4 h										0	0 fish/h
Pond J2	OB	1	2011	- -								20		20	- -
Pond J2	MT	1	2012	28.9 trap-h								1		1	1 fish/24h
Pond J3	MT	1	2012	13.7 trap-h										0	0 fish/24h
Pond J4	MT	1	2012	13.4 trap-h								1		1	2 fish/24h
Pond J5	MT	1	2012	13.3 trap-h										0	0 fish/24h
Pond J6	MT	1	2012	13.3 trap-h										0	0 fish/24h
Pond J6	EF	1	2021	988.1 s										0	0 fish/100s
Pond J6	MT	1	2021	288.0 (dec. h)										0	0 (# fish per trap per 24 h)
Pond J7	MT	1	2012	28.0 trap-h								1		1	1 fish/24h
Pond J8	MT	1	2012	29.0 trap-h								1		1	1 fish/24h

Notes: MT- Minnow Trapping, EF- Electrofishing, OB- Observed, FN-Fyke net, GN- Gill net, FD- Found dead.

SECTION 5 • DESCRIPTION OF POTENTIAL EFFECTS ON FISH AND FISH HABITAT

A comprehensive analysis of the potential pathways for effects on fish and fish habitat during the construction, dewatering, operational, closure, and post-closure phases of the Meliadine Extension, is provided in Volume 7 of the Meliadine Extension FEIS Addendum.

Potential effects to fish and fish habitat are predicted to occur through the loss of waterbody area due to the footprint of Project Infrastructure and resulting alteration of the hydrological landscape (Figure 2.2-1). For clarity, the following description of effects has been split into those occurring through infrastructure footprint and water loss (Section 35 of the Fisheries Act) and those lost through the footprint required for the deposition of deleterious substances (Section 36 of the *Fisheries Act*).

5.1 Potential Effects to Fish and Fish Habitat Lost through Project Infrastructure (Section 35)

The following fish habitat losses are predicted to result in HADD under Section 35 of the *Fisheries Act* and arise from the development, operation, and closure of the Meliadine Mine.

There are a total of 38 waterbodies, 4 of which are categorized as lakes and the remaining are pond habitat. It is worth mentioning that the watercourses haven't been included in this section as they are primarily ephemeral streams with overland flow. They also only account for approximately 2 ha of the 431.73 Ha which will be impacted.

All waterbodies are assumed to be partially or completely overprinted by the changes to pit outlines, by the construction of new pits, associated mining activities and through mining infrastructure

A loss of 431.73 Ha is potentially predicted due to dewatering, loss of downstream connectivity, mining infrastructure, and overprinting from pits. The total area that falls under Section 35 equates to a total of 266.04 Ha.

5.2 Potential Effects to Fish and Fish Habitat Lost by Deposit of Mine Waste (Section 36)

All Section 36 losses that are incurred from the Meliadine Extension are anticipated to be permanent. A loss of approximately 165 Ha is potentially predicted due to deposit of mine waste. There are a total of 12 waterbodies, 3 of which are categorized as lakes and the remaining are pond habitat. The following waterbodies will be used for mine waste disposal: Saline pond (Lake B7); Contact water CPs (Lake B4 and Pond A52); and WRSF (overprinting Lake B34). Lake B7, B4, Pond A52, and Lake B34 are fish-frequented waterbodies and as such their use for mine waste disposal will require an amendment to Schedule 2 of the MDMER.

The total area of fish-frequented waterbodies/watercourses is:

- 58.1 ha for the B7 Saline Pond (Lake B7 = 57.8 ha; B6-B7 = 0.05 ha and B7-B25 = 0.2 ha)
- 92.9 ha for Contact Water CPs B4 and A52 (Lake B4 = 85.8 ha, B4-B5 = 0.01 ha, B4-B36 = 0.01 ha, B4-B45 = 0.01 ha, and Pond A52 = 7.1 ha); and
- 4.4 ha for WRSF5 (Lake B34 = 4.4 ha).

The Meliadine Extension will also result in the unavoidable loss of the fish-frequented waterbodies B25 (1.6 ha), B32 (0.6 ha), J2 (1.9 ha), J3 (1.5 ha), and J8 (1.4 ha) as a result of the extensions of the TSF, WRSF's. In addition, Pond B61 (1.16 ha), Pond B60 (0.98 ha), B61-B60 (0.02 ha), and Pond D31 (0.91 ha) will be overprinted as a result of placement of Saline WRSF and Tiriganiaq-Wolf ore. The waterbodies are fish-frequented or assumed to be fish-frequented therefore are included in the Schedule 2 amendment of the MDMER.

SECTION 6 • MEASURES AND STANDARDS TO AVOID OR MITIGATE IMPACTS TO FISH

6.1 Description of Measures and Standards

Agnico Eagle is committed to conduct its operations in an environmentally and socially responsible manner, and to avoid adverse effects on the environment and people who use the land and resources.

Project-specific measures and standards to avoid and mitigate harm to fish and fish habitat during dewatering activities, including the construction of offsetting habitat will include the following measures:

- Erosion and sediment control measures will be in place before commencing any works that have the potential to release sediment into waters frequented by fish.
- The existing Sediment and Erosion Management Plan will be complied with.
- All works will avoid using explosives in or near water, respect timing windows, and will prevent entry of deleterious substances in water.
- A Fish-Out Plan has been developed according to current published DFO Guidelines.
- All water intakes within ponds that support fish shall adhere to the Freshwater Intake End-of-Pipe Fish Screen Guideline (Fisheries and Oceans Canada 1995).
- Water withdrawal will adhere to the Protocol for Winter Water Withdrawal from Ice covered Waterbodies in the Northwest Territories and Nunavut (Fisheries and Oceans Canada 2010).

6.2 Monitoring Effectiveness of Measures and Standards

Agnico Eagle has developed monitoring and management programs required to mitigate, monitor, and report on its environmental performance against the regulatory requirements contained within its Meliadine operating authorizations, permits, licenses, and leases consistent with the legal requirements of applicable Acts and Regulations in Nunavut. Existing and approved programs will focus on ensuring impacts to waste and water, are consistent with those predicted for the Mine. The accuracy of the environmental impact predictions and the effectiveness of the mitigation measures will be verified through monitoring and annual reporting. If unusual or unforeseen adverse environmental impacts are noticed, corrective action will be put in place. Contingency measures to account for effects unable to be mitigated by measures outlined in Section 6.1 will be addressed through the adaptive management process. Under this process the existing mitigation measures will be adjusted or new mitigation measures implemented if necessary. External reporting will be completed, as required.

Applicable monitoring plans to fish habitat, include:

- Water Management Plan (including Freshet Action Plan and Sediment and Erosion Management Plan);
- Adaptive Management Plan;
- Water Quality and Flow Monitoring Plan;
- Spill Contingency Plan, which will be implemented to prevent effects from emergency spills and help address Inuit concerns related to effects to fish and fish habitat;

- Aquatic Effects Monitoring Program, developed to monitor mining-related processes that could potentially impact the aquatic receiving environment, including fish

In addition, a monitoring plan for the Dewatering of Site Ponds Offsetting Plan is outlined in Section 8.1.2 of this report, which includes monitoring to confirm that offsetting measures are implemented and effectively counterbalancing the habitat losses from the dewatering activities.

Consistent with Project Certificate No.006, Agnico Eagle is required to:

- Mitigate potential impacts to surface waters (T&C 27);
- Develop appropriate sediment and erosion controls to prevent impacts to surface waters and sediment quality (T&C 28);
- Monitor and mitigate potential effects to the freshwater aquatic environment (T&C 30);
- Mitigate impacts of runoff/sedimentation into freshwater aquatic habitat (T&C 31);
- Mitigate impacts of the Project on natural drainage and minimize sedimentation (T&C 32);
- Mitigate impacts of explosives use on fish and fish habitat (T&C 33); and
- Prevent blockages or restrictions to fish passages (T&C 34).

SECTION 7 • RESIDUAL EFFECTS

The Meliadine Extension will result in permanent, unavoidable fish habitat losses through direct habitat loss from infrastructure footprint, change in flows, and through the deposit of mine waste.

Table 7.1-1: Residual Effects

Sub-watershed	*Fisheries Act* Section	Sub-watershed Area (ha)
A	Section 35	-161.86
	Section 36	-7.07
	Total	**-168.93**
B	Section 35	-90.65
	Section 36	-153.00
	Total	**-243.64**
D	Section 35	-
	Section 36	-0.91
	Total	**-0.91**
H	Section 35	-0.24
	Section 36	-
	Total	**-0.24**
I	Section 35	-7.63
	Section 36	-
	Total	**-7.63**
J	Section 35	-5.66
	Section 36	-4.71
	Total	**-10.37**
Totals		
Section 35 Total		**-266.04**
Section 36 Total		**-165.69**
Grand Total		**-431.73**

7.1 Calculation of Habitat Losses and Habitat Equivalence Units (HU)

The Habitat Evaluation Model (HEP) used to quantify habitat losses for Meliadine Mine is based on the procedure used for the 2012 No Net Loss assessment for the Meadowbank Mine (Agnico Eagle 2012) and incorporates refinements that have been introduced during subsequent work between 2014 and 2016 to develop offsetting measures for Vault and Phaser Lake, and various changes incorporated as a result of the DFO review of the conceptual (Agnico Eagle 2016) and fish offsetting plans for the approved Whale Tail Pit Project and Whale Tail Expansion Project.

The foundation of the HEP is the delineation of areas that provide certain "habitat types" based on depth and substrate (Table 7.1-2). Habitat types 1 – 9 are lake/pond habitats and were components of the original Meadowbank HEP model. These habitats are delineated by intersecting depth and substrate polygons. The designation HT10 was assigned to the connecting channels that occur between several of the lakes in the Meliadine Extension area. These channels are wide and have predominantly boulder and cobble substrates. They have shallow surface flow over most or all of their length during spring freshet and only interstitial flow over most or all of their length later in the open-water season. They freeze during the winter. The edge of the water in the connecting channels was observed in the field to correspond closely to the edge of the tundra vegetation. Therefore, these channels were delineated by digitizing the edge of the tundra vegetation in the July 21, 2011, satellite imagery. The upstream and downstream limits of the connecting channels are defined by the intersection of the upstream and downstream lake elevations with the digital elevation model (DEM).

Habitat types 11 and 12 are also specific to this area and represent small streams with fine and coarse substrate respectively. These streams were characterized from field measurements made using a point-transect method during the period July 5 through July 8, 2016. Many of these small streams have multiple channels and the width of each of the channels was measured at transects across the watercourses and those widths were summed to determine the total wetted width at a transect. To facilitate GIS analysis, the primary flow path of each of these streams was digitized based on the July 21, 2011, satellite imagery and a 'stream polygon' was created by assigning the total wetted width to the digitized flow path at each transect location. This allows the areas of stream habitat to be visualized and calculated during baseline and subsequent stages using standard GIS techniques. The portion of stream habitat that is fine substrate (habitat type 11) or coarse substrate (habitat type 12) was calculated by multiplying the stream polygon area by the proportion of the points where substrate was fine or coarse based on the field measurements.

The extent of each lake/pond habitat type was calculated from data collected by the historical baseline studies and from existing conditions studies conducted in 2020 and 2021.

Table 7.1-2: Characteristics of the Habitat Types

Habitat Type	Depth Zone	Substrate
1	0-2 m	Fine
2	0-2 m	Mixed
3	0-2 m	Coarse
4	2-4 m	Fine
5	2-4 m	Mixed
6	2-4 m	Coarse
7	>4 m	Fine
8	>4 m	Mixed
9	>4 m	Coarse
10	connecting channels	Coarse
11	small streams	Fine
12	small streams	Coarse

The HEP classified lake and pond habitats into ten habitat types based on depth and substrate. For the Meliadine Extension, two additional habitat types have been incorporated to address connecting channels between lakes and small streams. The suitability of each habitat type is ranked between 0 to 1 for each of four life functions (spawning, nursery, foraging, overwintering) for each fish species that is (or is predicted to be) present. The area of each habitat type (in hectares) is multiplied by a habitat suitability index (HSI) and a series of weightings (a species weighting, a life-function weighting, and an access factor), and summed to derive a value in HUs that describes both the quality and quantity of habitat. These calculations were based on baseline conditions in the vicinity of the current Meliadine Mine. The habitat loss associated with the Meliadine Extension was calculated for all impacted areas using the HEP described below. In the net change calculation, only differences between existing and post-construction conditions were compared. For waterbodies where HADD is predicted, the area of the potential HADD has been conservatively estimated as the entire waterbody area at this time, although the actual HADD realistically may be smaller based on the final location of the designed mine footprint plus implemented mitigations and environmental design features.

The habitat suitability term represents the relative quality of each habitat type for each life function of each fish species present in the region. In the case of this HEP, the life functions of spawning, nursery, foraging and overwintering were considered. Habitat suitability for each life function is indicated through a ranking of 0, 0.25, 0.5, 0.75, or 1. HSIs for fish species and habitat types used in this HEP are shown in Table 7.1-2. The HSIs for the lake habitats (habitat types 1 – 9) were developed through a series of consultations and workshops beginning in July 2011 with KIA, HTO, and DFO, and a series of workshops held with Golder Associates and DFO between November 2011 and December 2011. Further review of the HEP by Minns (2017) recommended continued use of this method. Depth zones, substrate types (fines, mixed, coarse), and habitat types under pre-construction conditions throughout the primary study area are shown on Table 7.1-2.

The HSIs for stream habitat types 10, 11, and 12 were assigned based on their habitat characteristics and the fish sampling conducted as part of baseline investigations, taking into consideration the HSIs previously developed for lake habitats. Based on data collected at the Whale Tail and Meliadine projects, these connecting channels do not provide foraging habitat for large-bodied fish (foraging HSI = 0). The connecting channels are assumed to provide habitat for juvenile large-bodied fish during the open-water season. Therefore, for all large-bodied species the connecting channels have been assigned the same nursery HSIs as coarse substrate in the 0 – 2 m lake depth stratum. The connecting channels freeze during the winter and therefore have been assigned HSIs of zero for overwintering for all species and zero for spawning for fall/winter spawning species, which includes all of the large-bodied species that are present. The nursery HSIs for fine and for coarse substrates in the 0 – 2 m lake depth habitat (habitat types 1 and 3 respectively) have been applied to habitat types 11 and 12 for the four large-bodied fish species. The absence of adult large-bodied fish from the electrofishing catches in the small streams is consistent with them being so shallow, and confirms that, as would be expected, there is little if any foraging in these streams by adults of the large-bodied species. The small streams have been assigned a HSI of zero (0) for foraging by the four large-bodied species. Slimy Sculpin and Ninespine Stickleback, the two small-bodied

species that are present in the Meliadine mine area, have both been captured in the connecting channels and likely use the shallow areas and interstitial spaces in much the same way that they do in shallow areas with coarse substrate in lake habitats. For these two species the HSIs for fine and for coarse substrates in the 0 –2 m lake depth habitat (habitat types 1 and 3, respectively) were applied to habitat types 12 and 13 for spawning, nursery and foraging.

Using the equation below, the area of each habitat type (in hectares) is multiplied by the habitat suitability index (HSI) and a series of weights (a species weight, a life-function weight and an access weight) a habitat cofactor, and summed to derive a value in habitat units (HUs) for an individual species.

The habitat units are summed across all species to arrive at the total number of habitat units, which describes both the quality and quantity of habitat for the fish community.

The HEP model used here can be described, for each fish species (spp 1-n) as:

$$HU_{spp\ 1-n} = \sum HT\ 1-12 \left(\sum sp, nu, fo, ow \left[HT_{1-12} \times HSI_{sp,nu,fo,ow} \times LF \times SP \right] \right) \times AF \times HC$$

where: HT1-12 = area (ha) of habitat types 1 through 12

HSI $_{sp,\ nu,\ fo,\ ow\ =}$ habitat suitability index for each life function:

sp = spawning use
nu = nursery use
fo = foraging use
ow = overwintering use

LF = life function weight
SP = species weight
AF = access factor
HC = habitat co-factor

7.1.1 Life Function Weight

This HEP values all life functions equally, with a weight of 0.25 each assigned for spawning, nursery, foraging and overwintering.

7.1.2 Species Weight

Depending on fishery or habitat objectives for an area, fish species can be given different weights in a HEP model. The species weight for this HEP takes into account the fisheries contribution and cultural contribution, based on consultation with the local community. While it is recognized that small-bodied fish play an important role in the ecosystem, they are generally less limited in distribution due to their ability to use a wider variety of habitat types (e.g., small, ephemeral ponds and watercourses). Most of

the waterbodies sampled as part of the program to document existing conditions for the Meliadine Extension contained only ninespine stickleback.

Information shared by community members highlights that larger waterbodies and large-bodied fish are more important than shallow ponds that freeze to the bottom each year and support only small-bodied fish on a seasonal basis. Therefore, large-bodied fish species were assigned a higher species weight than small-bodied fish species. The exact species weights differ among waterbodies depending on how many large and small bodied species are present or predicted to be present; the species weight for species of local interest (Char, Grayling, and Lake Trout) were generally approximately double the species weights for other species. For example, in a waterbody with Arctic Grayling, Ninespine Stickleback, and Slimy Sculpin, Grayling were assigned a species weight of 0.5, while Stickleback and Sculpin each were assigned a weight of 0.25.

7.1.3 Access Factor

Access factor may be used when fish assemblages are expected to change in the offsetting scenerio. According to this concept, the access factor is 1 for any species present in the habitat area, and 0 for any species not present. Each species receives an access factor in both the loss and gain calculations. Therefore, the opening of access to a habitat area for a species (that did not have access previously), results in an increase of habitat units. Similarly, the loss of access results in a loss of habitat units. These gains or losses may be complete (i.e., affect all species), or partial (only some species are affected). The presence or absence of a species in loss calculations is typically based on the observed presence/absence of each species during baseline monitoring studies. For the calculations in this report, an access factor of 1 has been applied for all fish species that have been captured or are hypothesized to be present in a particular lake/pond/stream. If a change in access is predicted for an offset scenario (i.e., due to the removal of a barrier to fish movement) the change would need to be confirmed as part of compensation monitoring.

Table 7.1-3: Access Factor Theoretically Applied to Each Species for Habitat Loss and Gain Calculations, based on Presence/Absence (or Anticipated Presence/Absence for Offsetting Projects)

Scenario	Access Factor	
	Losses	Gains
Species Present	1	1
Species Not Present	0	0

7.1.4 Habitat Co-factor

The habitat co-factor represents any changes to non-mapped habitat quality (thermal, hydrological, biological or chemical regimes) that will occur as a result of impacts or offsetting. No habitat co-factor has been applied to the HEP calculations presented in this report.

7.2 Section 35 HADD

The following fish habitat losses are predicted to result in HADD under Section 35 of the *Fisheries Act* and arise from the development, operation and closure of the Meliadine Mine. All ponds are assumed to be

partially or completely overprinted by the changes to the pit outline of these pits, by the construction of new pits, associated mining activates, and through mining infrastructure . A loss of 431.73 Ha is predicted due to dewatering, loss of downstream connectivity, mining infrastructure, and overprinting from pits.

Table 7.2-1: Fish and Fish Habitat Lost through Project Infrastructure (Section 35)

A Watershed		B Watershed		H Watershed	I Watershed	J Watershed
Lake A6	Pond A3	Pond B30	Pond B39	Pond H15e	Pond I1	Pond J7
Lake A8	Pond A4	Pond B31	Pond B36			Pond J6
Pond A37	Pond A5	Lake B5	Pond B37			Pond J5
Pond A35	Pond A32	Lake B6	Pond B38			Pond J4
Pond A7	Pond A34	Pond B19	Pond B59			
Pond A44	Pond A50	Pond B22	Pond B62			
Pond A45	Pond A51		Pond B63			
Pond A49	Pond A19					
Pond A2	Pond A53					
Pond A2A						

7.3 Section 36 HADD

All Section 36 losses that are incurred from the Meliadine Extension are anticipated to be permanent. A loss of 165.69 Ha is predicted due to dewatering, loss of downstream connectivity, mining infrastructure, and overprinting from pits.

Table 7.3-1: Fish and Fish Habitat Lost by Deposit of Mine Waste (Section 36)

A Watershed	B Watershed	J Watershed	D Watershed
Pond A52	Lake B4	Pond J2	Pond D31
	Lake B7	Pond J3	
	Pond B25	Pond J8	
	Lake B34		
	Pond B32		
	Pond B60		
	Pond B61		

SECTION 8 • OFFSETTING PLAN

8.1 Overview

As a result of the Meliadine Extension, there will be HADD to fish habitat resulting in a potential loss of 431.73 Ha. Which will be required to be offset through Section 35 and 36 of the *Fisheries Act*. As such, fish offsetting will be required to counterbalance this loss.

Following DFO's Policy for Applying Measures to Offset Adverse Effects on Fish and Fish Habitat under the Fisheries Act (Fisheries and Oceans Canada 2019), Agnico Eagle has applied avoidance and mitigation prior to considering offsetting for Project effects (Sections 5 and 6). According to the new policy, offsetting measures may be grouped into the following general categories (Fisheries and Oceans Canada 2019):

- Habitat restoration and enhancement, which includes physical manipulation of existing habitat to improve habitat function and productivity;
- Habitat creation which is the development or expansion of aquatic habitat into a terrestrial area;
- Chemical or biological manipulation, which includes chemical manipulation of water bodies, and stocking of fish or shellfish, management or control of aquatic invasive species; and
- Complementary measures, which are investments in data collection and scientific research related to maintaining or enhancing the productivity of commercial, recreational or Aboriginal fisheries.

Explicit within the offsetting plan was an effort to consider Indigenous Peoples perspectives during its development. Additional community and stakeholder engagement was conducted in 2021, along with field programs, to inform potential offsetting options. Community engagement specific to this offsetting plan is summarized in Section 3.

8.2 Habitat Creation and Enhancement through Pit Lake Offsetting

8.2.1 Pit Lake Habitat Gains

Agnico Eagle is proposing to restore 132.2 Ha of habitat through reclaiming mined out pits and converting them into pit lakes for fish habitat. The calculations are preliminary and do not account for additional gains through the flooding and reconnection of previously dewatered lakes and channels to pit lakes, and to other purposed options as described in Section 8.2.4. Additional offsetting options will be further analyzed through continued consultation with the local community and the KIA to determine supplemental gains in habitat to offset the total anticipated loss. To finalize the additional locations and type of offsetting measures, Agnico Eagle proposes to work jointly with the KIA and community members in 2022.

The same HEP model (described in Section 7) that was used to estimate fish habitat losses was also used to estimate the habitat gains that are potentially achievable via the restoration of up to nine pit lakes as offsetting measures. It is envisioned that lakes will be created at the locations of the following pits: FZO01, FZO02, FZO04, PUM02, PUM04, TIR02, TIR04, WES03, and WES04 (Table 8.2-1). The same HEP model,

species-specific HSI ratings and weightings and calculation methods that were used to estimate losses were also used to estimate habitat gains except that only three habitat types were used: HT3 (< 2 m depth; coarse substrate), HT6 (2 to 4 m; coarse substrate) and HT9 (> 4 m depth; coarse substrate). Habitat types 1, 2, 4, 5, 7, and 8 were not used to estimate the pit lake fish habitat gains because it was anticipated that the pits will be backfilled with coarse material only. It was further assumed that the depth profiles of the restored pit lakes would consist of 10% of lake area as habitat type 3, 40% of area as habitat type 6 and 50% as habitat type 9. In addition, we assume that Arctic char, Lake trout, Slimy sculpin, Ninespine stickleback, and Arctic grayling will be present in all of the above-mentioned pit lakes.

A preliminary estimate of the additional offsets required due to the anticipated time lag between the HADD and the start of the offsetting works in the pit lakes has been generated. This estimate is based on the approach of Minns (2017) and R-code provided by DFO. It assumes the current HU estimates are reasonable. It also assumes that the HADDs all occur in year 1, the offsetting in all pit lakes starts at year 7 and the time to get to a working ecosystem in each pit lake is 20 years.

Table 8.2-1: Total Area of Each Proposed Pit Lake and Area of Each Habitat Type in Restored State

Grouped Pit Lakes	Individual Pit Lakes	Total Area (ha)	Habitat Type 3 Area (ha)	Habitat Type 6 Area (ha)	Habitat Type 9 Area (ha)
F Zone Pit Lake	FZO01	15.2	1.52	6.08	7.6
	FZO02	9.3	0.93	3.72	4.65
	FZO04	11.5	1.15	4.6	5.75
Pump Pit Lakes	PUM02	5.9	0.59	2.36	2.95
	PUM04	8.3	0.83	3.32	4.15
TIRI02/04 Pit Lake	TIRI02	8.3	0.83	3.32	4.15
	TIRI04	24.5	2.45	9.8	12.25
WES Pit Lake	WES03	15.1	1.51	6.04	7.55
	WES04	34.1	3.41	13.64	17.05
Grand Total	-	**132.2** (83.4 HU)	-	-	-

8.2.2 Timeline, Design, and Construction of the Offsetting Measure

The offsetting measures will begin in 2023 following field reconnaissance with the KIA and community members to be conducted in summer 2022.

8.2.2.1 Offsetting Measure Schedule

As mentioned above, preliminary estimates of the additional offsets required due to the anticipated time lag between the HADD and the start of the offsetting works in the pit lakes has been considered. It assumes the current HU estimates are reasonable. It also assumes that the HADDs all occur in year 1, the offsetting in all pit lakes starts at year 7 and the time to get to a working ecosystem in each pit lake is 20 years.

8.2.2.2 Design, Construction and Effects of Offsetting Measures

Construction and design for the proposed offsetting measures will be adjusted based on community and KivIA inputs as well as additional field reconnaissance. Based on findings and additional options, effects of offsetting measures will be further evaluated.

8.2.3 Monitoring Offsetting Measures

The proposed monitoring program includes physical and ecological components to record whether the spawning pad is constructed and functioning as intended.

Physical monitoring components will include, but not limited to:

- On-the-ground photos
- Aerial photos
- Visual observation

Ecological monitoring components include, but not limited to:

- Fish use

The assessment of habitat features incorporates monitoring methods with specific quantitative criteria for success (i.e., physical structure), as well as complementary "qualitative" tools (i.e., fish use). All lines of evidence are then integrated in a weight-of-evidence approach to make the final determination regarding habitat feature functionality.

Physical Monitoring Components

The structure will be assessed post-construction to determine whether it meets assumptions taken. These include area, depth and substrate characteristics. A comparison will be made to the specifications described for these characteristics, to determine whether expected physical habitat gains are achieved in the as-built state (i.e., to confirm features were constructed as planned).

Structural integrity will be visually assessed after construction to record any movement occurring during this process.

Ecological Monitoring Components

Monitoring fish use of the spawning pad will consist of methods such as sampling adult fish populations using hoop-nets and assessing reproductive activity using larval drift traps.

8.2.4 Contingency Offsetting Measures

Contingency measures are planned secondary measures which would be implemented if the planned offsetting measures did not meet their objective(s). Agnico Eagle has identified other alternatives relating to additional offsetting such as;

- Gravel placement to enhance or create spawning habitat in streams, lakes and/or ponds;

- Restore degraded sites through physical alterations;
- Sites that are not yet degraded but where preliminary changes had been observed;
- Boulder removal and channel restoration to allow passage for fish;
- Flooding and reconnecting watercourses to new pit lake habitat;
- Restoring dewatered lake basins; and
- Enhancement of Nipissar Lake by raising water levels to reestablish Arctic Char population (approximately 90 Ha).

Desktop review was completed to identify these options. Additional field investigations will be required to confirm suitability.

8.2.5 Offsetting Measures Cost Estimate

Agnico Eagle will work with DFO through the review of this conceptual fish offsetting plan to determine the monetary value of the letter of credit to cover the cost for implementing elements of the offsetting plan, including monitoring measures.

SECTION 9 • SUMMARY

There will be HADD to fish habitat as a result of the Meliadine Extension during the operations phase, resulting in a potential loss of up to approximately 431.73 Ha which will be required to be offset through Section 35 and 36 of the *Fisheries Act*. Accepted methods of habitat enhancement will be utilized to offset the HADD that will occur.

Habitat creation through the pit lakes is estimated to contribute at least 132.2 Ha. Additional habitat will be created through reflooding of the previously dewatered waterbodies and watercourses. In addition, further habitat offsets projects will be identified through continued consultation with the community and the KIA. These various offsets will contribute to the overall offsetting strategy for the Meliadine Extension and will meet the community objectives of restoring habitat. The restoration of pit lakes is also in line with Agnico Eagle's sustainability and closure objectives and their respect for the local community values.

Other options for habitat offsetting include:

- Gravel placement to enhance or create spawning habitat in streams, lakes and/or ponds;
- Restore degraded sites through physical alterations improving channel features and fish passage;
- Sites that are not yet degraded but where preliminary changes had been observed;
- Flooding and reconnecting watercourses to new pit lake habitat;
- Restoring dewatered lake basins; and
- Enhancing Nipissar Lake by raising water levels to reestablish Arctic Char population (approximately 90 Ha).

Offsetting options may change as Agnico Eagle continues to consult and collaborate with local community organizations in addition to collecting supplemental field data for continued offsetting efforts.

SECTION 10 • REFERENCES

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APPENDIX A • CONCORDANCE WITH AUTHORIZATIONS CONCERNING FISH AND FISH HABITAT PROTECTION REGULATIONS (SCHEDULE 1)

Table A-1: Concordance with Authorizations Concerning Fish and Fish Habitat Protection Regulations (Schedule 1)

Schedule 1 Description	Section of Report
Section 2. A detailed description of the proposed work, undertaking or activity and, if applicable, a detailed description of the project of which the proposed work, undertaking or activity is a part, including:	
(a) the purpose of the proposed work, undertaking or activity and, if applicable, the project;	Sections 2.2 & 2.3
(b) the associated infrastructure;	Sections 2.1 & 2.2
(c) any permanent or temporary structure involved; and	Sections 2.1 & 2.2
(d) the construction methods, building materials, explosives, machinery and other equipment that will be used.	Sections 2.1 & 2.2
Section 3. If physical works are proposed, the project engineering specifications, scale drawings and dimensional drawings.	TBD
Section 4. A description of the phases and the schedule of the proposed work, undertaking or activity and, if applicable, the project of which the proposed work, undertaking or activity is a part.	Section 1 and Table 2.2-1
Section 5. A description of the location of the proposed work, undertaking or activity and, if applicable, of the location of the project of which the proposed work, undertaking or activity is a part, including:	
(a) geographic coordinates	Table 2.2-1 & 2.2-2
(b) a small-scale plan identifying the overall location and boundaries	Figure 2.2-1
(c) a large-scale site plan indicating the size and spatial relationship of the planned facilities, infrastructure and other components and of any existing structures, landmarks, water sources or water bodies and other geographic features	Figures 1.1-1 & 2.2-1
(d) the name of any watersheds, water sources and water bodies that are likely to be affected and the geographic coordinates of the water sources and water bodies.	Sections 2.1 & 2.2, 2.3
Section 6. The name of the community nearest to the location and the name of the county, district or region and the province in which the proposed work, undertaking or activity will be carried on	Section 1
Section 7. A description and the results of any consultations undertaken in relation to the proposed work, undertaking or activity, including with Indigenous communities or groups and the public. If applicable, the applicant must include information about any consultation already undertaken prior to submitting the application These consultations would have to have related to the work, undertaking, or activity for which an authorization would be sought. The description should provide an overview of consultations, if any, held with Indigenous groups and/or with the public at large.	Sections 3.1, 3.2 & 3.3
Section 8. A detailed description of the fish and fish habitat found at the location of the proposed work, undertaking or activity and within the area likely to be affected by the proposed work, undertaking or activity, including:	
(a) the type of water source or water body	Section 2 & Section 4
(b) the characteristics of the fish habitat and how those characteristics directly or indirectly support fish in carrying out their life processes	Sections 4 & 5
(c) the fish species that are present and an estimate of the abundance of those species	Section 4 and Table 4.1-1
(d) a description of how the information provided under paragraphs (a) to (c) was obtained, including the sources, methods and sampling techniques used.	Table 4.1-1
Section 9 (1) A detailed description of the likely effects of the proposed work, undertaking or activity on fish and fish habitat. The description must include:	

Schedule 1 Description	Section of Report
(a) the fish species that are likely to be affected and the life stages of the individuals of those species	Table 2.2-1, Table 2.2-2, and Table 3.1-1
(b) the extent and type of fish habitat that is likely to be affected	Section 5
(c) the probability, magnitude, geographic extent and duration of the likely effects on fish and fish habitat	Section 5
(d) a description of how the information provided under paragraphs (a) to (c) was derived, including the methodologies used	2022 FEIS (Sections 7.5.2-7.5.5)
Section 9 (2) A detailed description of:	
(a) how the effects referred to in subsection (1) are likely to result in the death of fish or the harmful alteration, disruption or destruction of fish habitat	Section 5
(b) the extent of the elements referred to in paragraph (a).	Section 5 and Figure 2.2-1
Section 10. A detailed description of the measures and standards that will be implemented, including an analysis of the expected effectiveness of those measures and standards, to:	
(a) avoid the death of fish or to mitigate the extent of their death or (b) avoid or mitigate the harmful alteration, disruption or destruction of fish habitat	Section 6
Section 11. A detailed description of the monitoring measures that will be implemented to assess the effectiveness of the measures and standards referred to in section 10.	Section 6
Section 12. A detailed description of the contingency measures that will be implemented if the measures and standards referred to in section 10 do not meet their objectives.	Section 8.2.4
Section 13. A quantitative and detailed description of the death of fish referred to in subsection 9(2) after the measures and standards referred to in paragraph 10(a) are implemented.	Section 8
Section 14. A quantitative and detailed description of the harmful alteration, disruption or destruction of fish habitat referred to in subsection 9(2) after the measures and standards referred to in paragraph 10(b) are implemented.	Section 7 & 9
Section 15. The number of habitat credits that the applicant plans to use to offset the death of fish referred to in section 13 and the harmful alteration, disruption or destruction of fish habitat referred to in section 14, as well as the number of any certificate referred to in paragraph 42.02(1)(b) of the Act.	TBD
Section 16. A detailed description of a plan to offset the death of fish referred to in section 13 and the harmful alteration, disruption or destruction of fish habitat referred to in section 14 that were not offset by the habitat credits referred to in section 15, including:	
(a) the geographic coordinates of the location where offsetting measures will be implemented;	Section 8
(b) a small-scale site plan identifying the general location and boundaries of the location where the measures will be implemented;	Appendix C
(c) a detailed description of the measures and how those measures will meet their objectives;	Section 8
(d) a detailed description of the monitoring measures that will be implemented to assess the effectiveness of the measures referred to in paragraph (c);	Section 8.2.3
(e) a detailed description of the contingency measures and associated monitoring measures that will be implemented if the measures referred to in paragraph (c) do not meet their objectives;	Section 8.2.4
(f) a detailed description of any adverse effects on fish and fish habitat that could result from the implementation of the plan;	TBD
(g) a detailed description of the measures and standards that will be implemented to avoid or mitigate the adverse effects and how those measures will meet their objectives;	Sections 6.1 & 6.2

Schedule 1 Description	Section of Report
(h) the timeline for the implementation of the plan;	Sections 8.2.2
(i) an estimate of the cost of implementing each element of the plan; and	Section 8.2.5
(j) if the implementation of the plan requires access to lands, water sources or water bodies that are not owned by the applicant, a description of the steps that are proposed to be taken to obtain the authorization required for the applicant, the Department of Fisheries and Oceans and anyone authorized to act on the Department's behalf to access the lands, water sources or water bodies in question. This information is not required if the applicant is Her Majesty in right of Canada, Her Majesty in right of a province or the government of a territory."	Not applicable

APPENDIX B • CONCORDANCE WITH S.27.1 METAL AND DIAMOND MINING EFFLUENT REGULATIONS

Table B-1: Concordance with Authorizations Concerning Fish and Fish Habitat Protection Regulations (Schedule 2)

27.1 (1) The owner or operator of a mine shall, before depositing a deleterious substance into a tailings impoundment area that is set out in Schedule 2, submit to the Minister of the Environment a compensation planthat includes the information described in subsection (2) and obtain that Minister's approval of the plan.

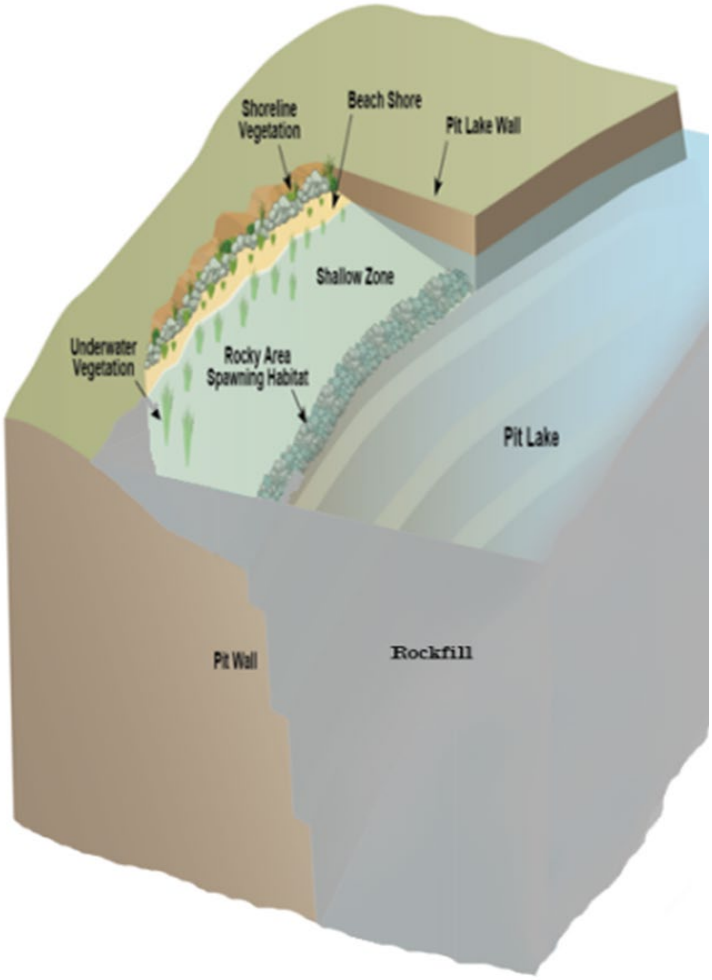
(2) The purpose of the compensation plan is to offset the loss of fish habitat resulting from the deposit of any deleterious substance into the tailings impoundment area. It shall contain the following information:	
(a) a description of the location of the tailings impoundment area and of fish habitat that will beaffected by the deposit;	The fish and fish habitat description affected by the location of the Contact Water and Saline Water Collection Pond, as well as the WRSF requiring a Schedule 2 amendment is found in Section 7.
(b) a quantitative impact assessment of the deposit onfish habitat;	A description of the area and habitat units lost due to the Contact Water and Saline Water Collection Pond, as well as the WRSF is found in Section 7.
(c) a description of the measures to be taken to offsetthe loss of fish habitat;	A description of the offsetting measures and gains to balance losses of fish habitat is found in Section 8.
(d) a description of the measures to be taken during theplanning and implementation of the compensation plan to mitigate any potential adverse effects on fish habitat that could result from the plan's implementation;	Section 8.2 describes the measures and standards that are taken to avoid and mitigate effects to fish and fish habitat as a result of Extension.
(e) a description of the measures to be taken to monitorthe plan's implementation;	Section 8.2.3 provides a description of monitoring the infrastructureas part of the offsetting.
(f) a description of the measures to be taken to verifythe extent to which the plan's purpose has been achieved;	Physical and ecological monitoring form part of the monitoring plan found in Section 8.2.
(g) the time required to implement the plan that allowsfor the achievement of the plan's purpose within a reasonable time; and	Not required for a Conceptual Offsetting Plan.
(h) an estimate of the cost of implementing eachelement of the plan.	Not required for a Conceptual Offsetting Plan.
(3) The owner or operator of a mine shall submit with the compensation plan an irrevocable letter of credit tocover the plan's implementation costs, which letter of credit shall be payable upon demand on the declining balance of the implementation costs.	If deemed required, a letter of credit will be submitted with finalauthorization package.
27.1 (1) The owner or operator of a mine shall, before depositing a deleterious substance into a tailings impoundment area that is set out in Schedule 2, submit to the Minister of the Environment a compensation planthat includes the information described in subsection (2) and obtain that Minister's approval of the plan.	
(4) The Minister of the Environment shall approve the compensation plan if it meets the requirements of subsection (2) and the owner or operator of a mine hascomplied with subsection (3).	This acknowledgement to be completed with final authorization package.
(5) The owner or operator of a mine shall ensure that the compensation plan approved by the Minister of theEnvironment is implemented and, if the compensation plan's purpose is not being achieved, the owner or operator shall inform the Minister of the Environment.	This acknowledgement to be completed with final authorization package.
(6) If the compensation plan's purpose is not being achieved, the owner or operator of a mine shall, as soon as practicable in the circumstances, identify and implement all necessary remedial measures to ensurethat the purpose is achieved.	This acknowledgement to be completed with final authorization package.

APPENDIX C • OFFSETTING AND CONTINGENCY OPTIONS

Figure C-1: Aerial Photo of potential spawning pad design

- Gravel placement to enhance or create spawning habitat in streams, lakes and/or ponds.

Figure C-2: Rehabilitation and Enhancement of mined out pits



Description:

- Partially fill pits with clean waste rock and flood to create lakes.
- Enhance habitat in outflow and connecting channels.

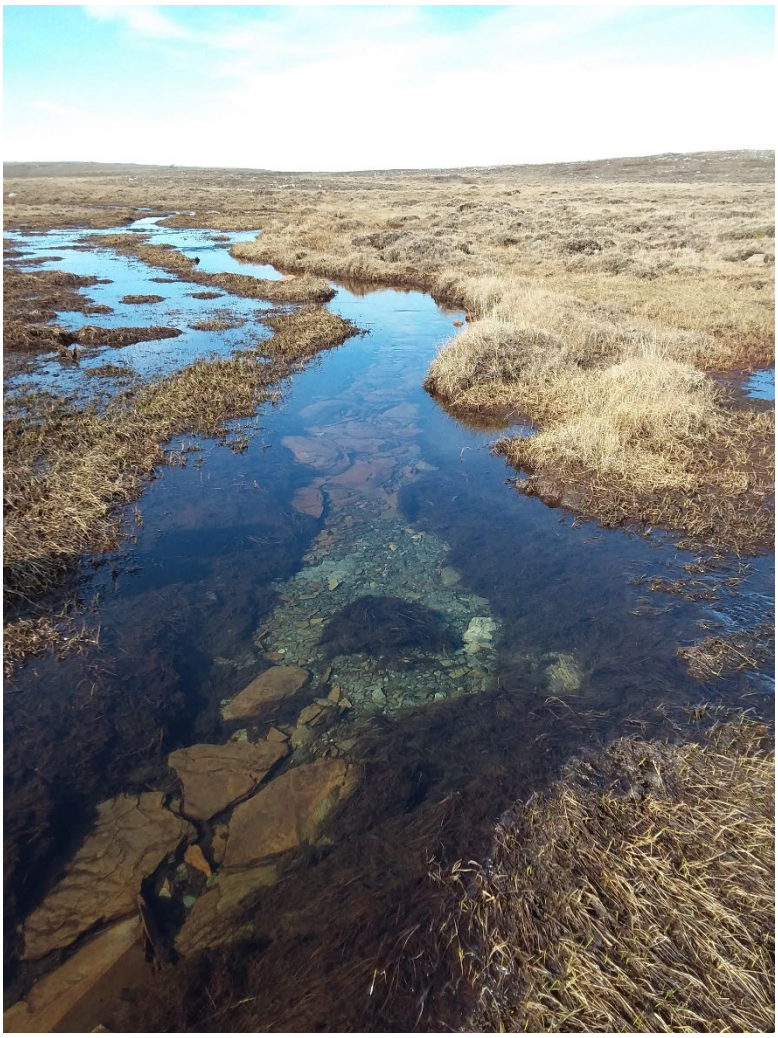
Benefits:

- Restoration of mine site in line with sustainability goals and closure objectives.
- Cost effective and potentially large habitat gain (~132 ha).
- Not creating any additional disturbance.

Design, Maintenance, Liability:

- Restore or enhance overwintering, foraging, spawning, and nursery habitat for large-bodied species on mine site.
- Maintenance would likely be in line with closure objectives.
- Time lag between impact and offset and uncertainty over how long it takes to establish functioning habitat may negate offsetting benefit.

Figure C-3: Reconnection of Watercourses

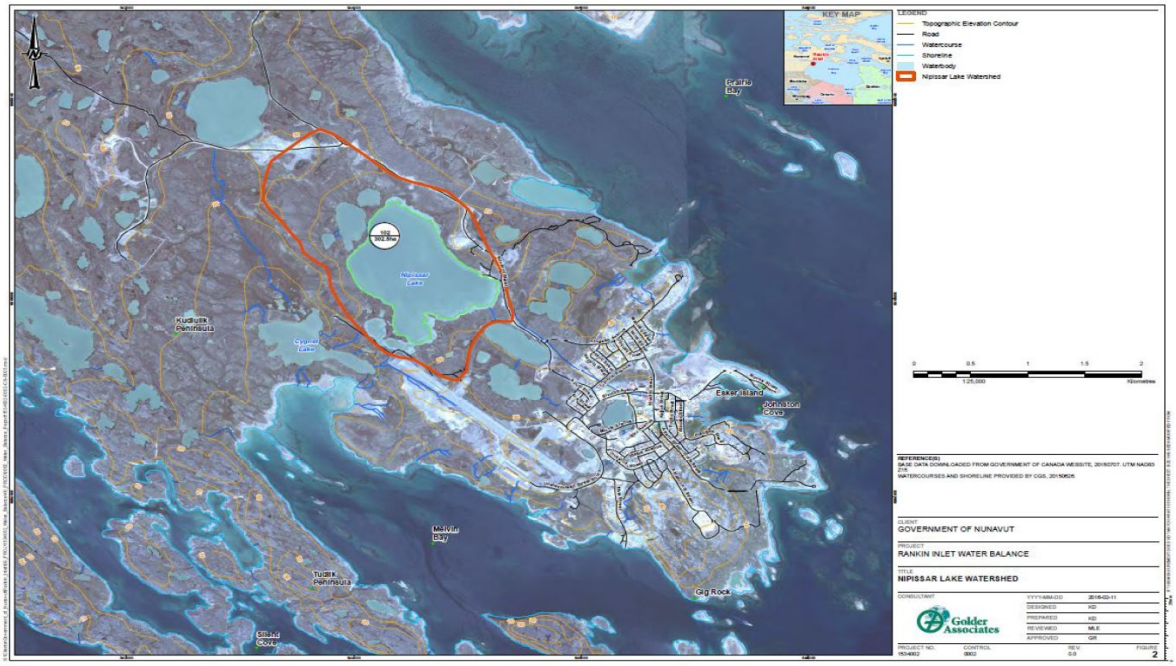


Reconnecting watercourses to new pit lake habitat and restoration of dewatered lake basins.

Also:

- Restoring degraded sites through physical alterations improving channel features and fish passage; and
- Sites that are not yet degraded but where preliminary changes had been observed.

Figure C-4: Enhancement of Nipissar Lake (Approximately 90 ha)



Nipissar Lake is the primary drinking water source for the community of Rankin Inlet. Volume in Nipissar Lake has been decreasing due to growing population and may not be sufficient for the community in the future.

Local consultation has suggested that Nipissar Lake once contained resident Arctic char, but that as water levels decreased in the lake, the char disappeared.

Opportunity to conduct watershed enhancement measures here that would also count as fish habitat compensation to offset habitat losses due to the mine development:

1. Enhancing water diversion by constructing a flow control structure at the outlet of Lower Landing Lake to store water during spring freshet/high flow events, could increase the window for water diversion from Lower Landing Lake to Nipissar Lake;
2. Constructing snow fences to trap wind-blown snow in winter, thereby increasing the amount of spring meltwater reporting to the lake; or
3. Assisting the community with reducing water usage to maintain water levels in the lake.

APPENDIX D • POTENTIALLY AFFECTED FISH HABITAT

Figure D-1: Areas of Potentially Affected Fish Habitat

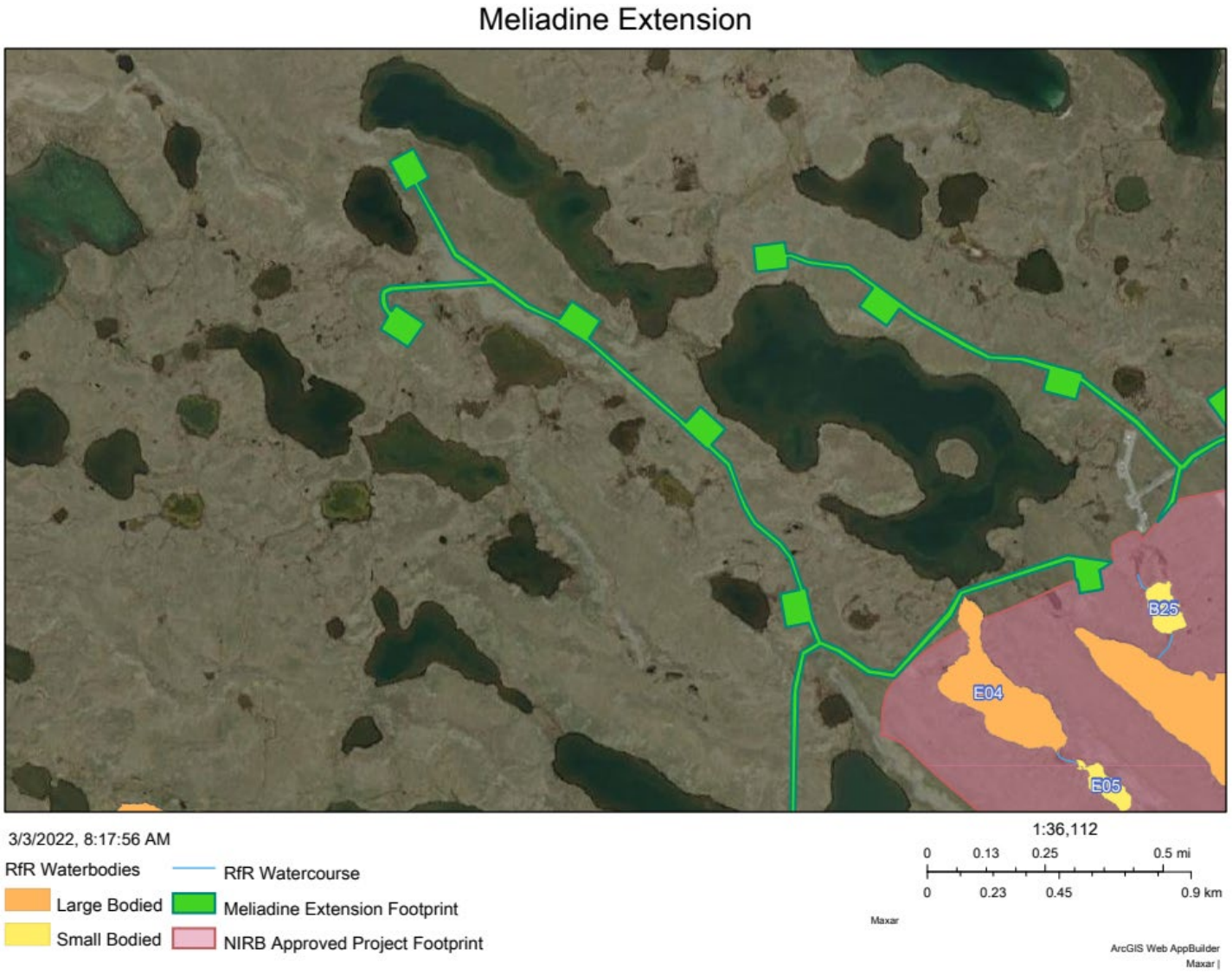


Figure D-2: Areas of Potentially Affected Fish Habitat

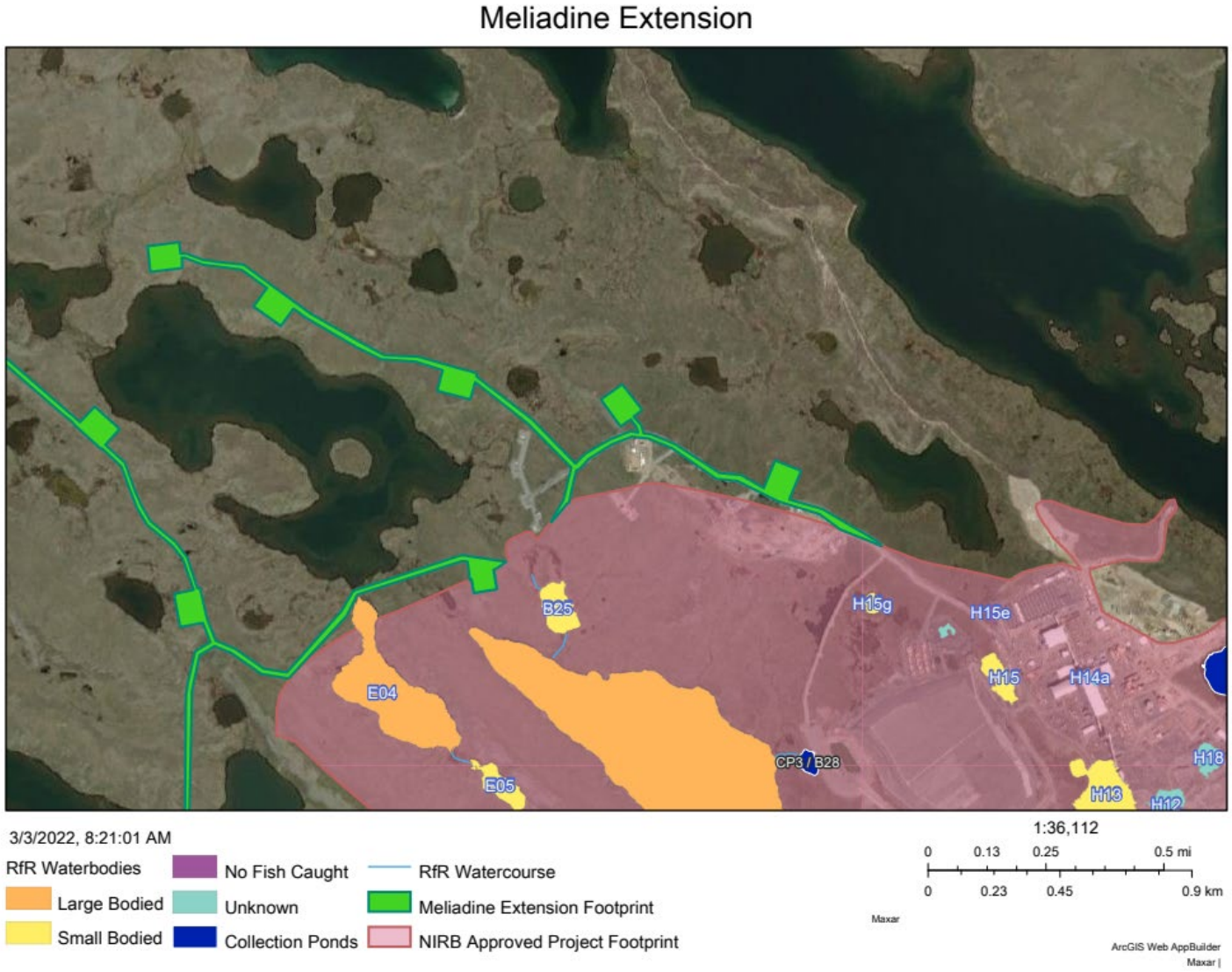


Figure D-3: Areas of Potentially Affected Fish Habitat

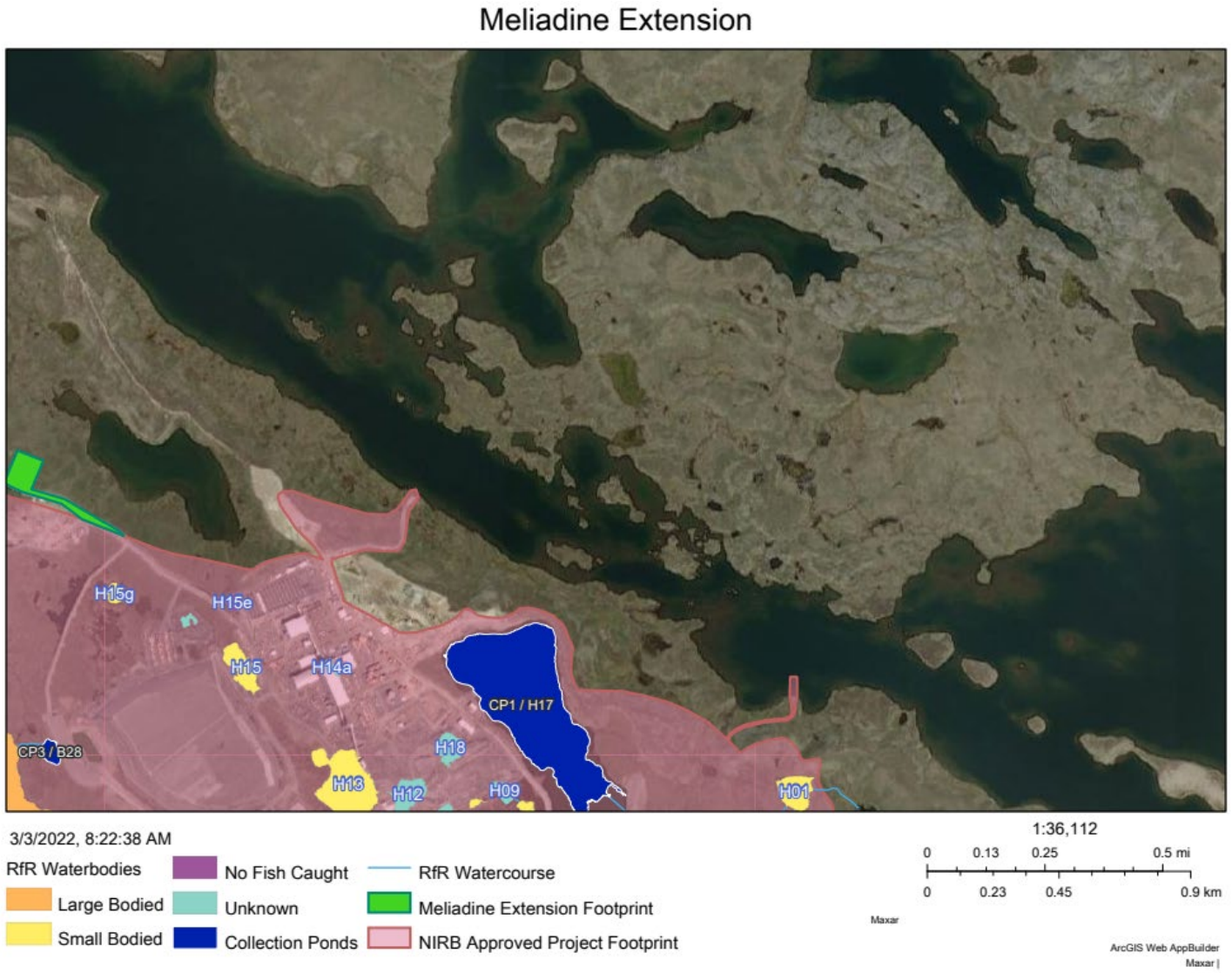


Figure D-4: Areas of Potentially Affected Fish Habitat

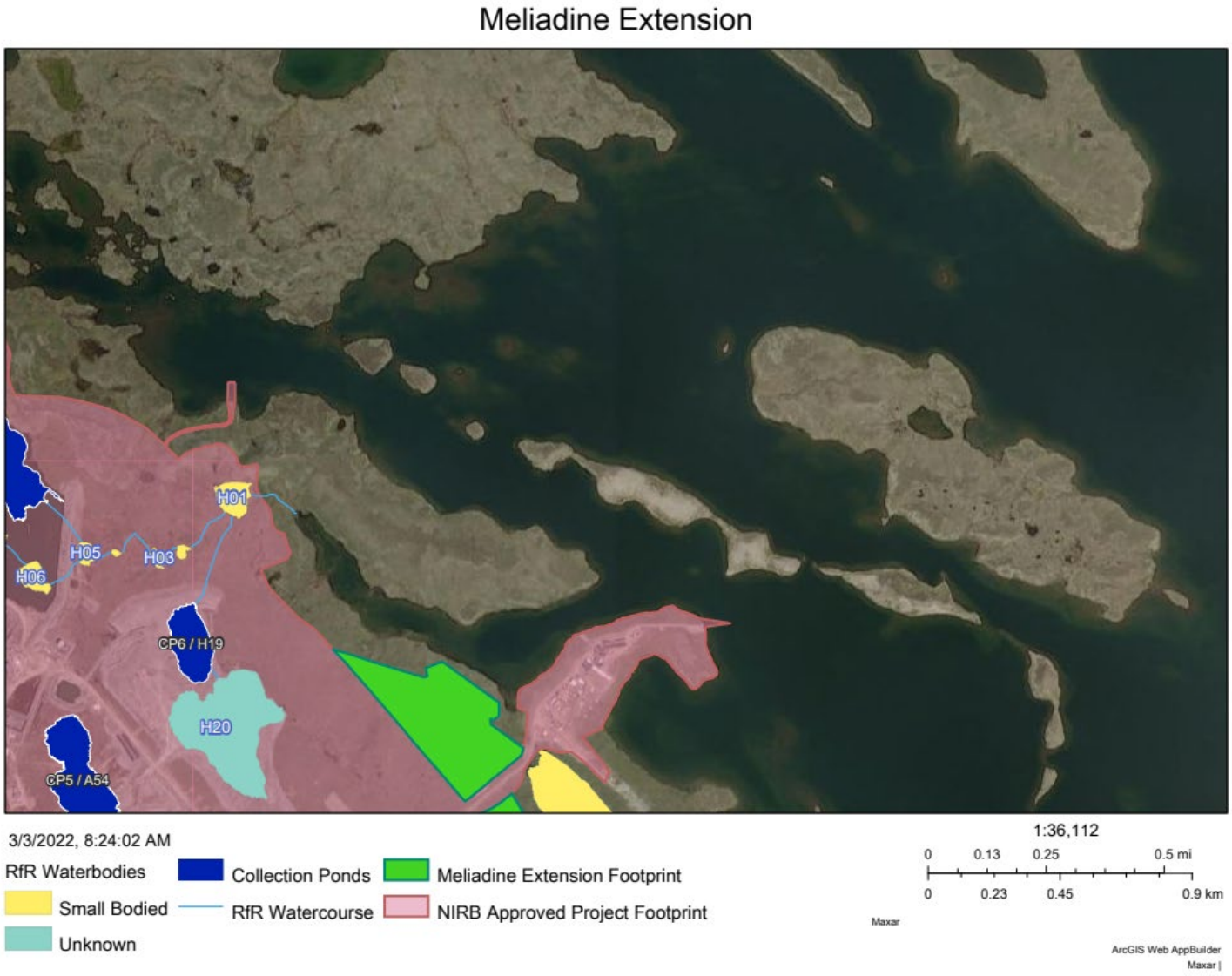


Figure D-5: Areas of Potentially Affected Fish Habitat

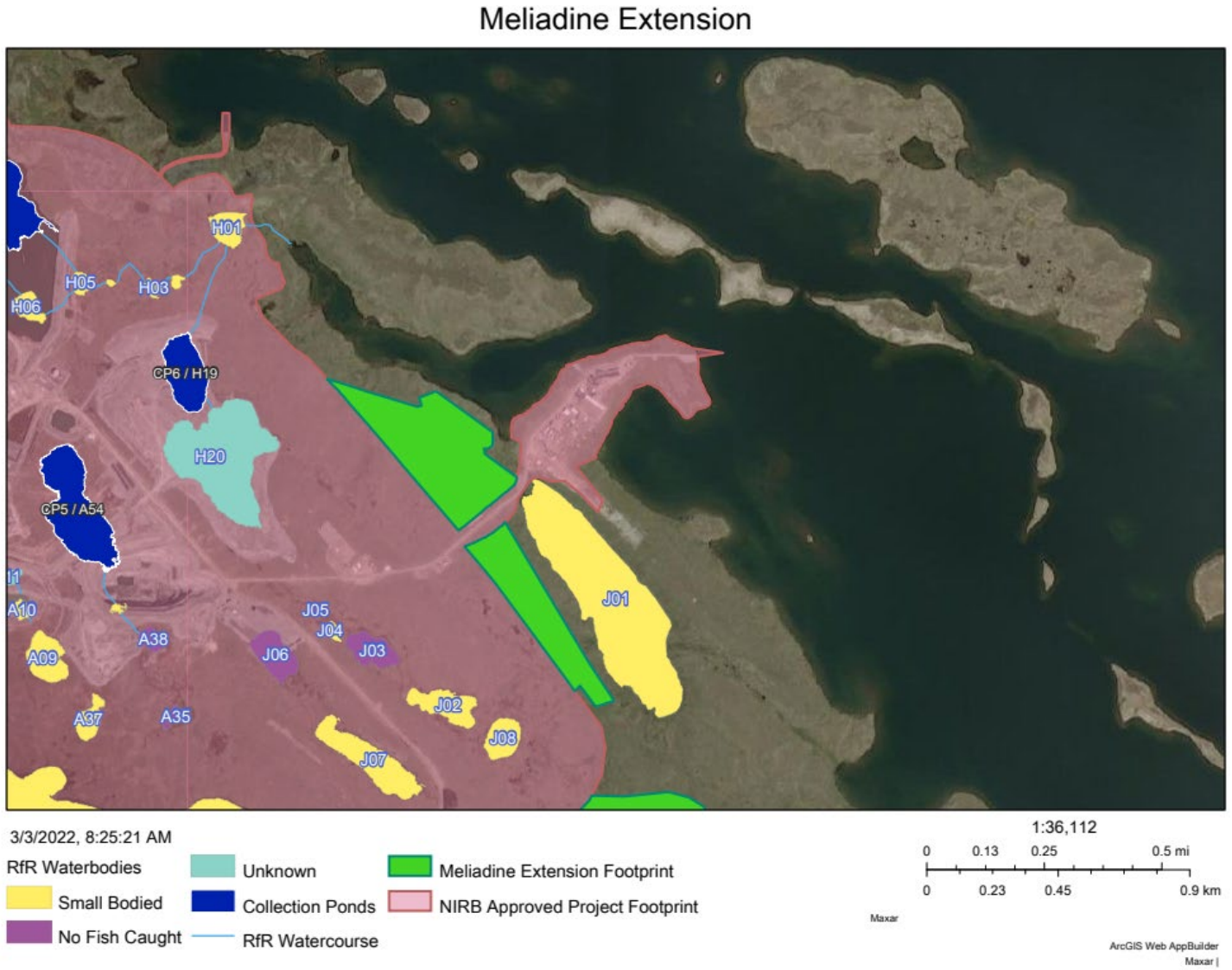


Figure D-6: Areas of Potentially Affected Fish Habitat

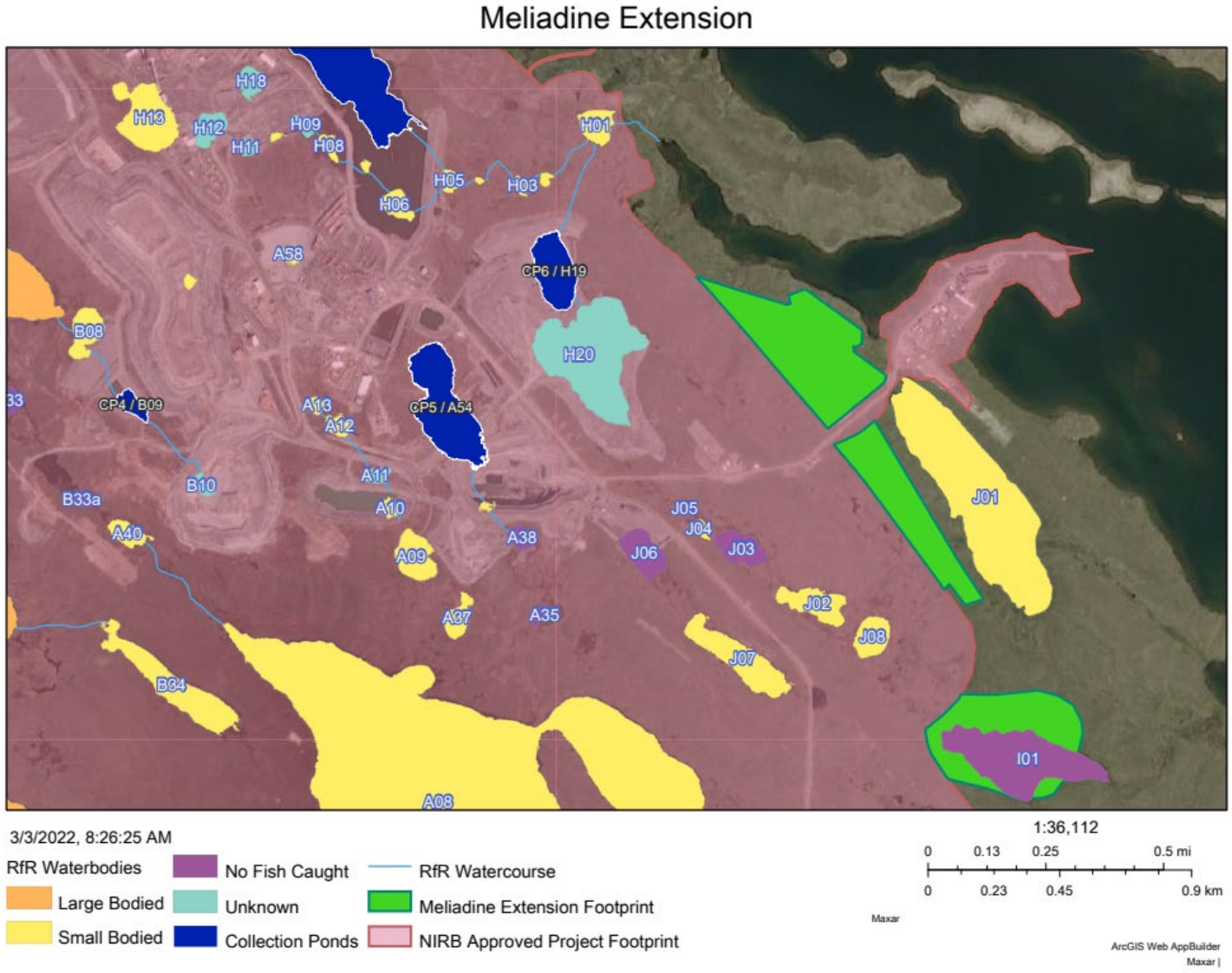


Figure D-7: Areas of Potentially Affected Fish Habitat

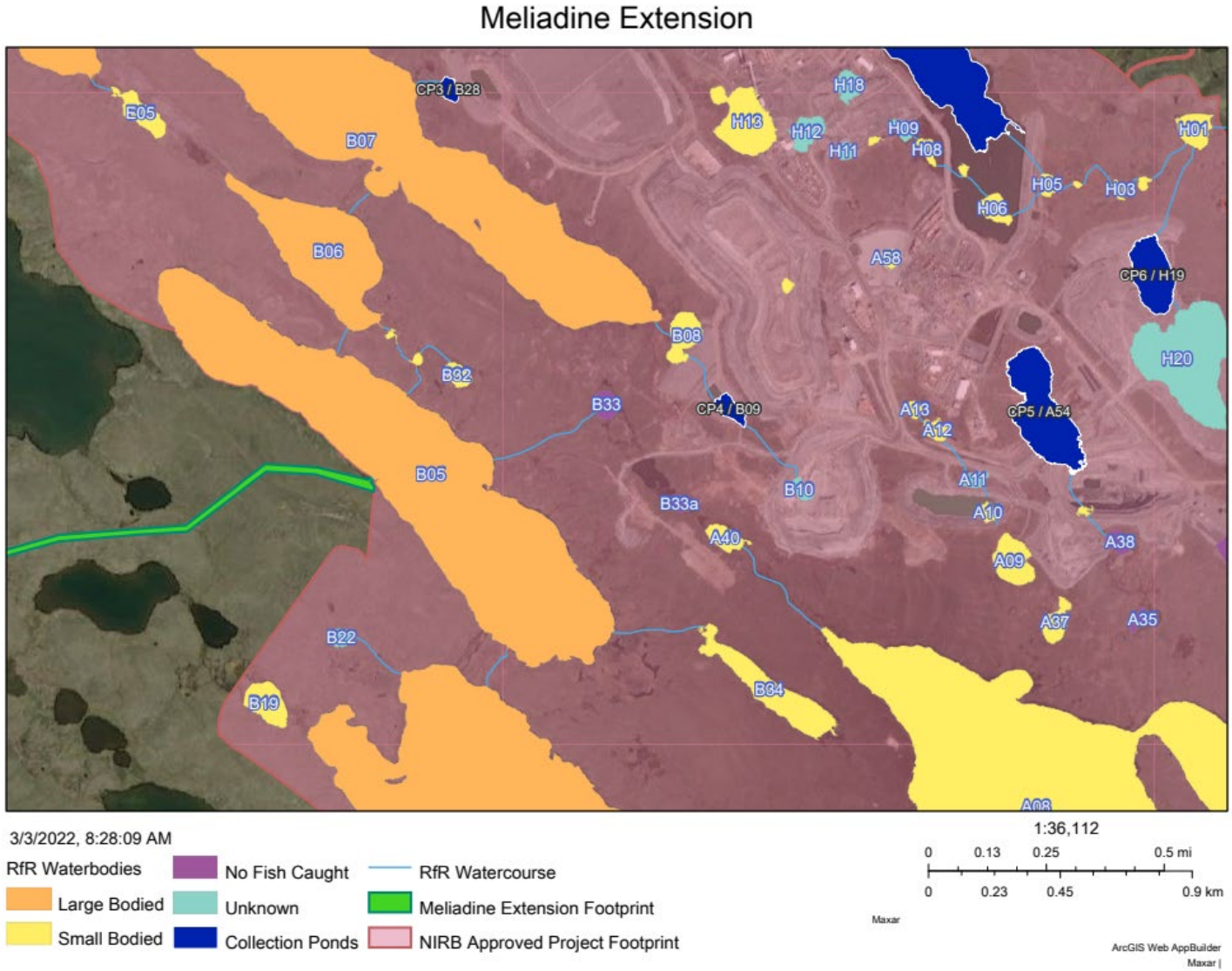


Figure D-8: Areas of Potentially Affected Fish Habitat

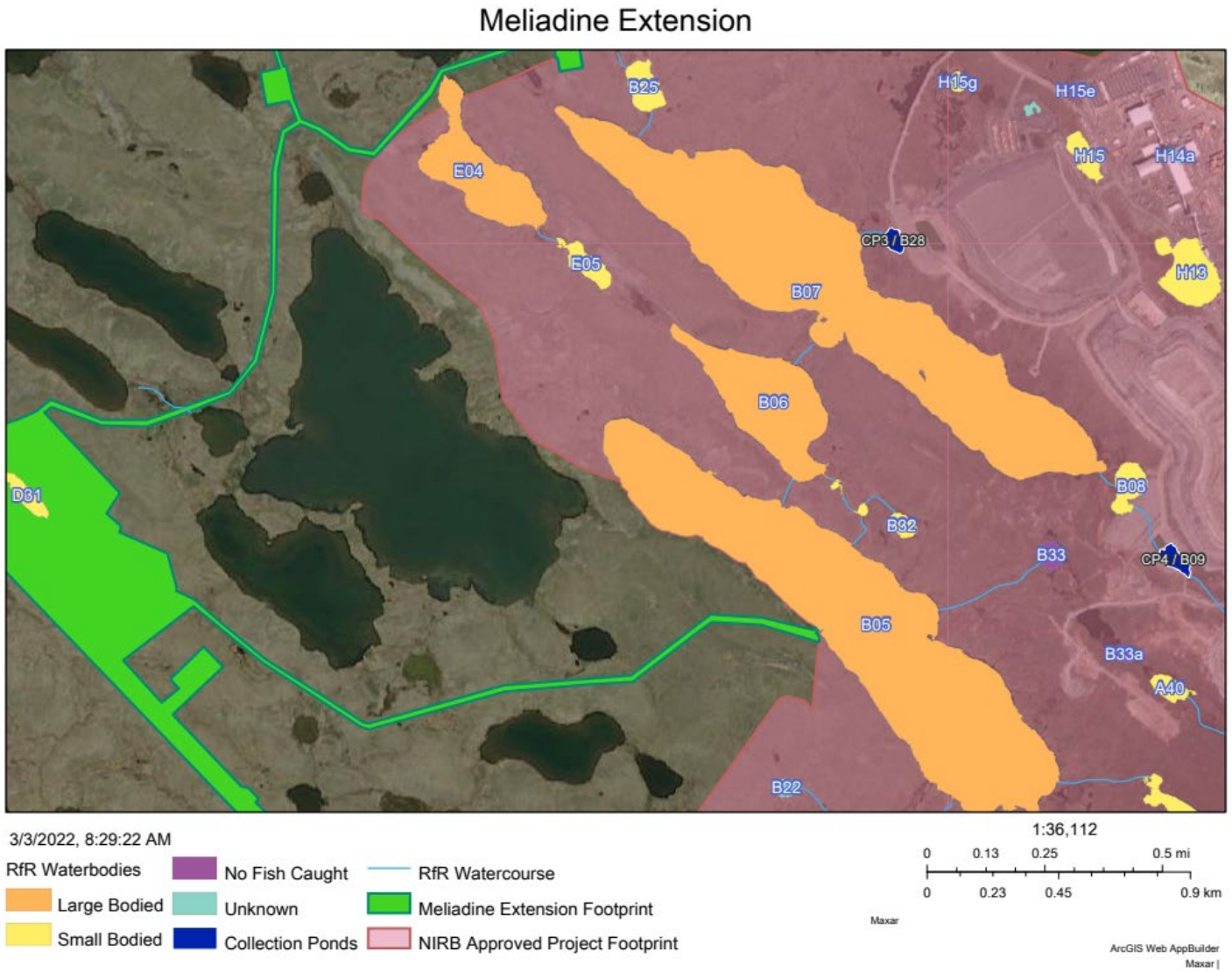


Figure D-9: Areas of Potentially Affected Fish Habitat

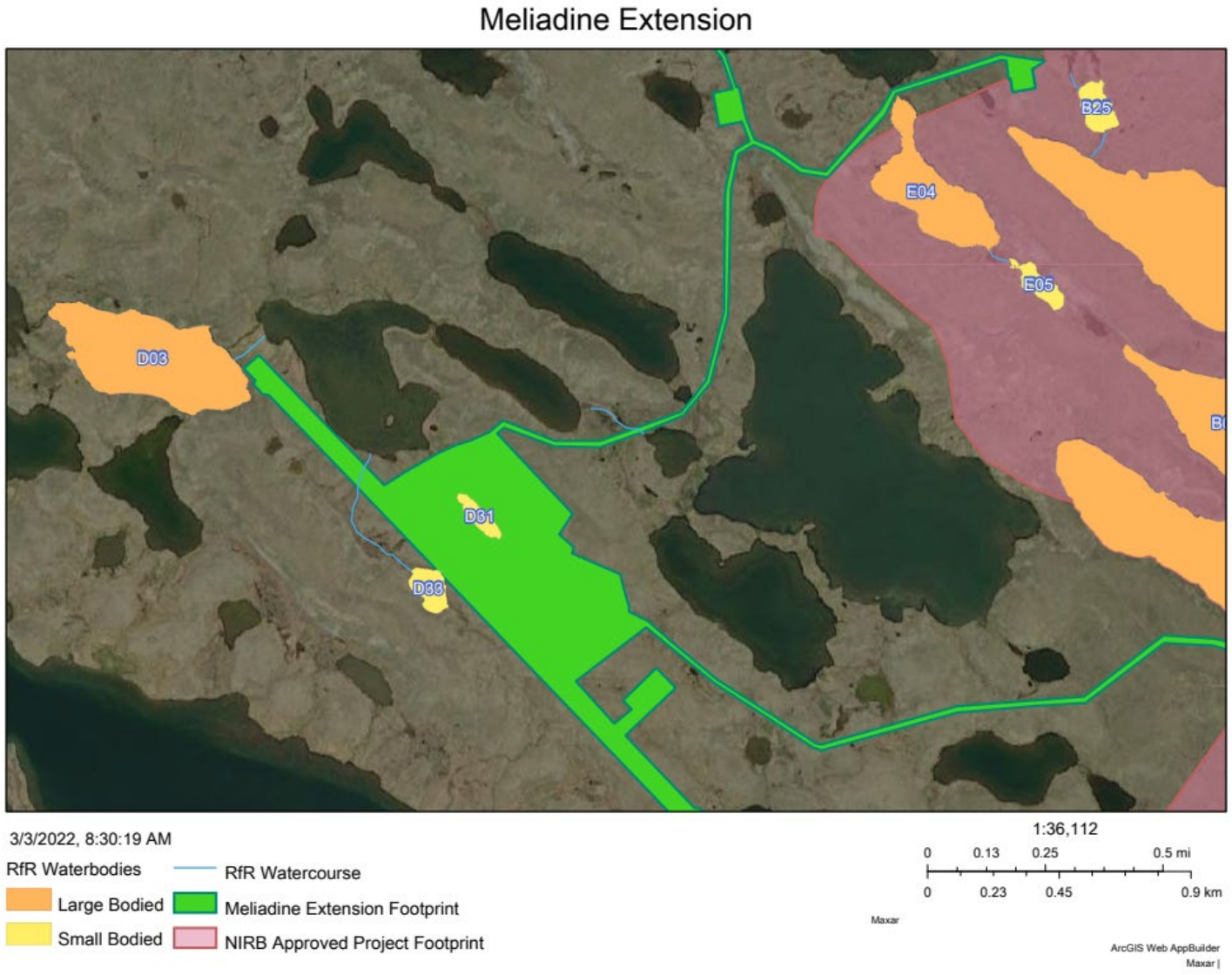


Figure D-10: Areas of Potentially Affected Fish Habitat

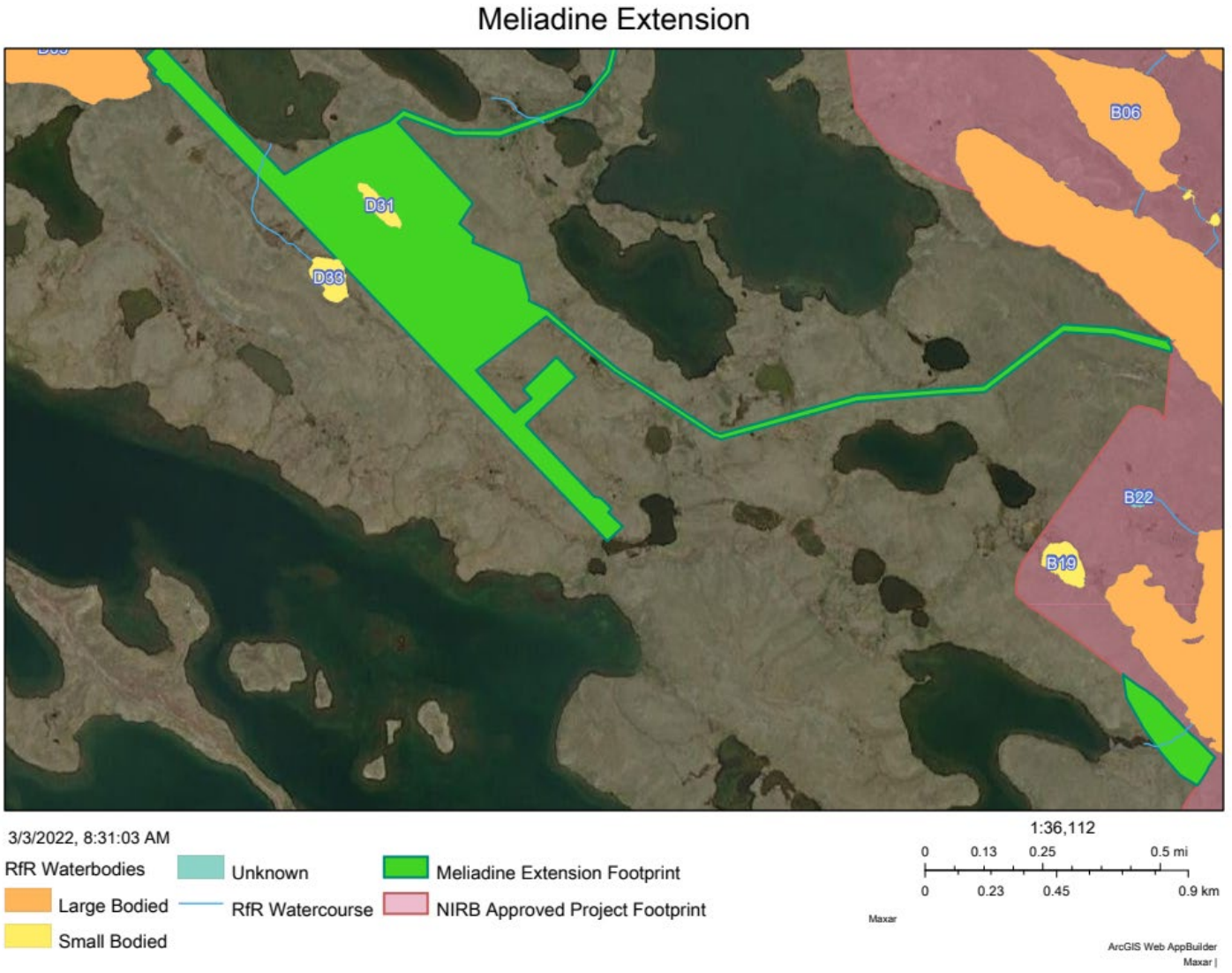


Figure D-11: Areas of Potentially Affected Fish Habitat

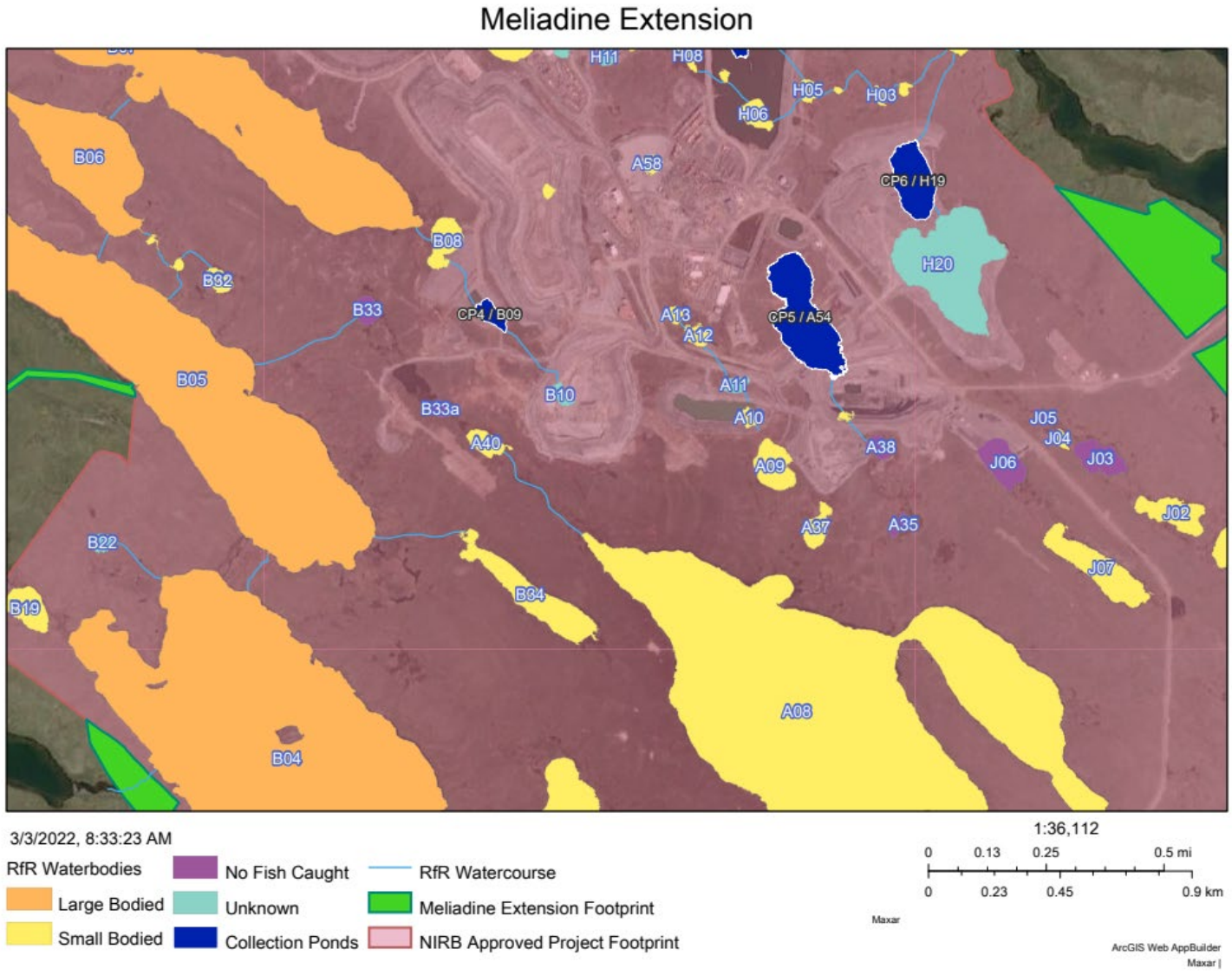


Figure D-12: Areas of Potentially Affected Fish Habitat

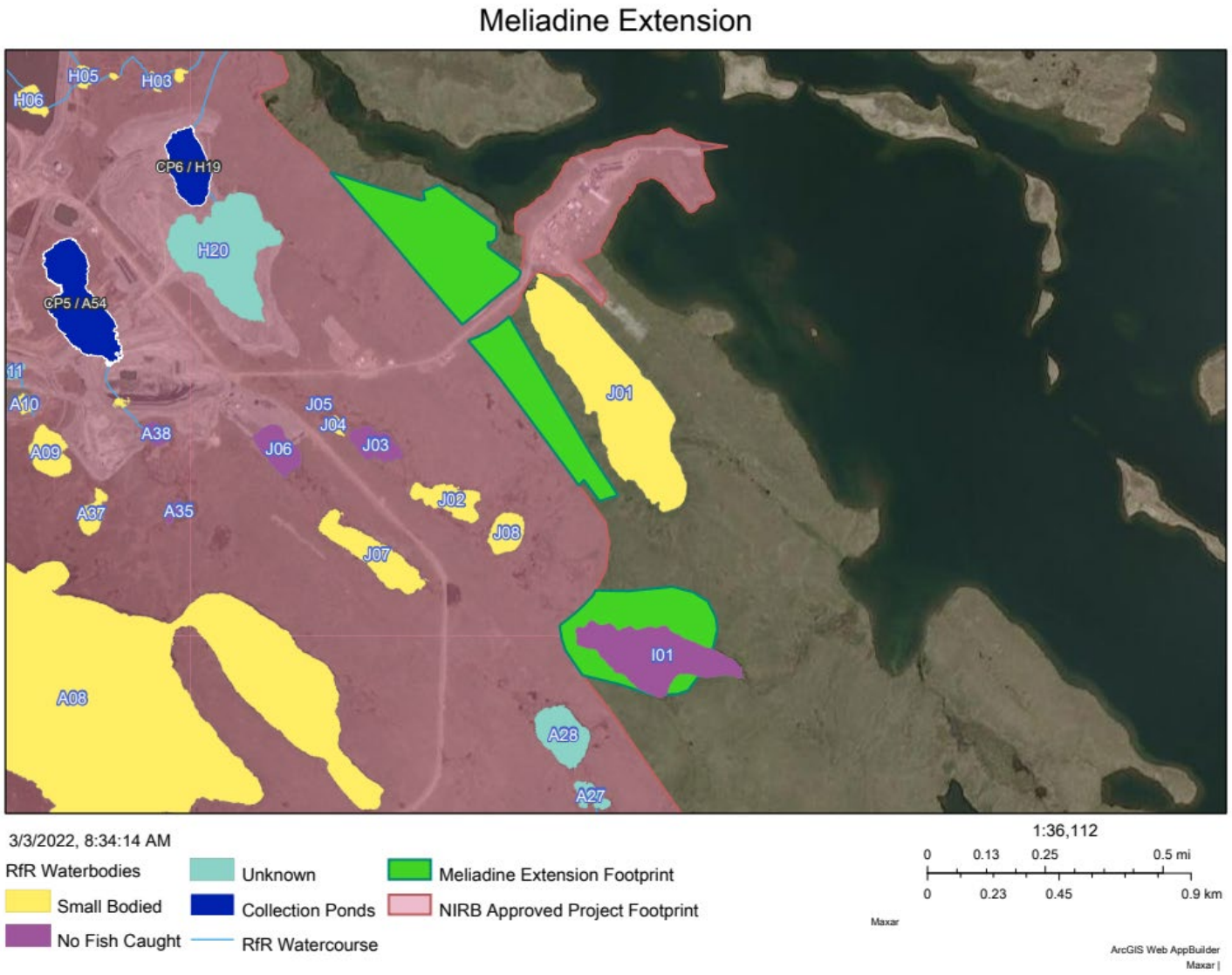


Figure D-13: Areas of Potentially Affected Fish Habitat

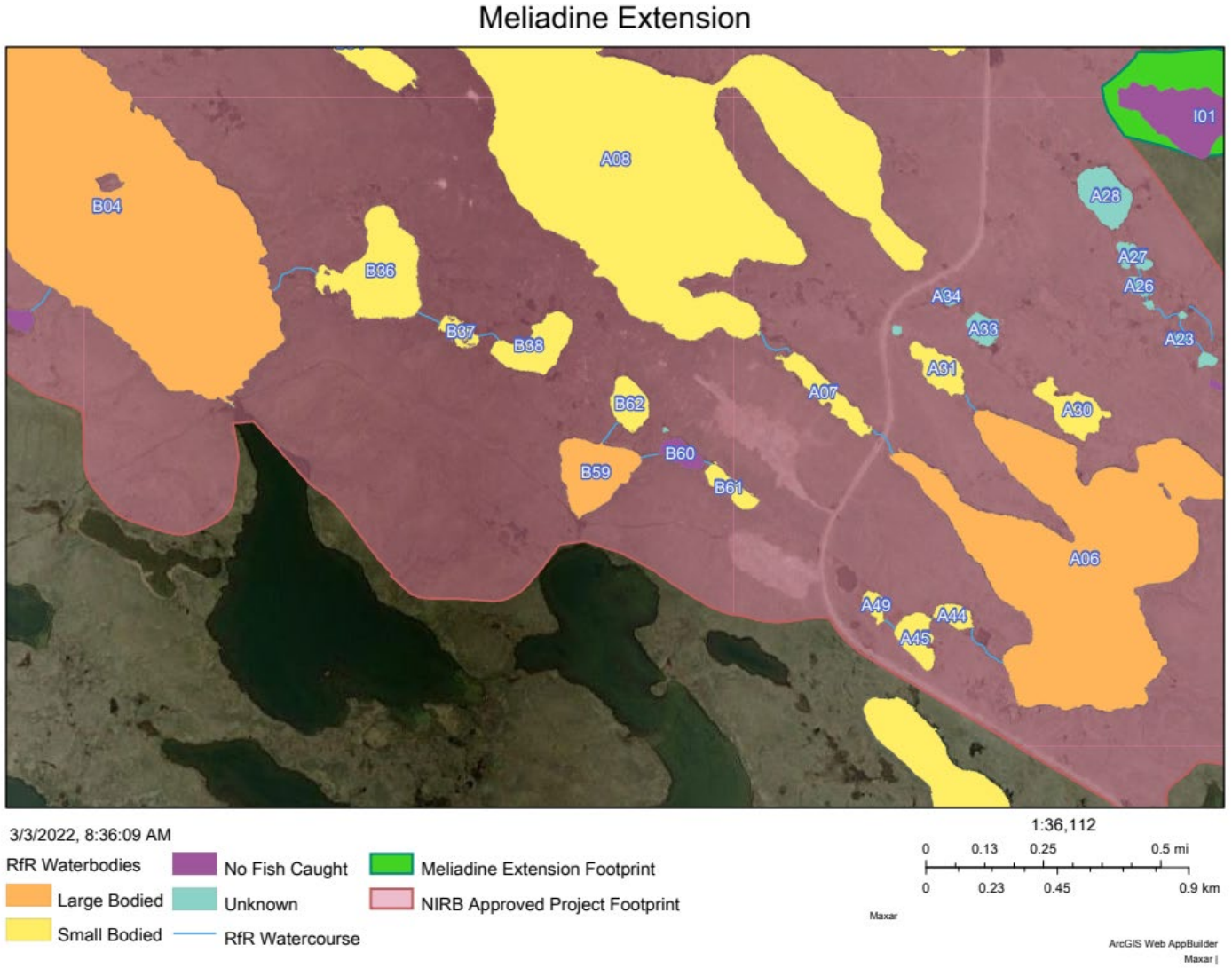


Figure D-14: Areas of Potentially Affected Fish Habitat

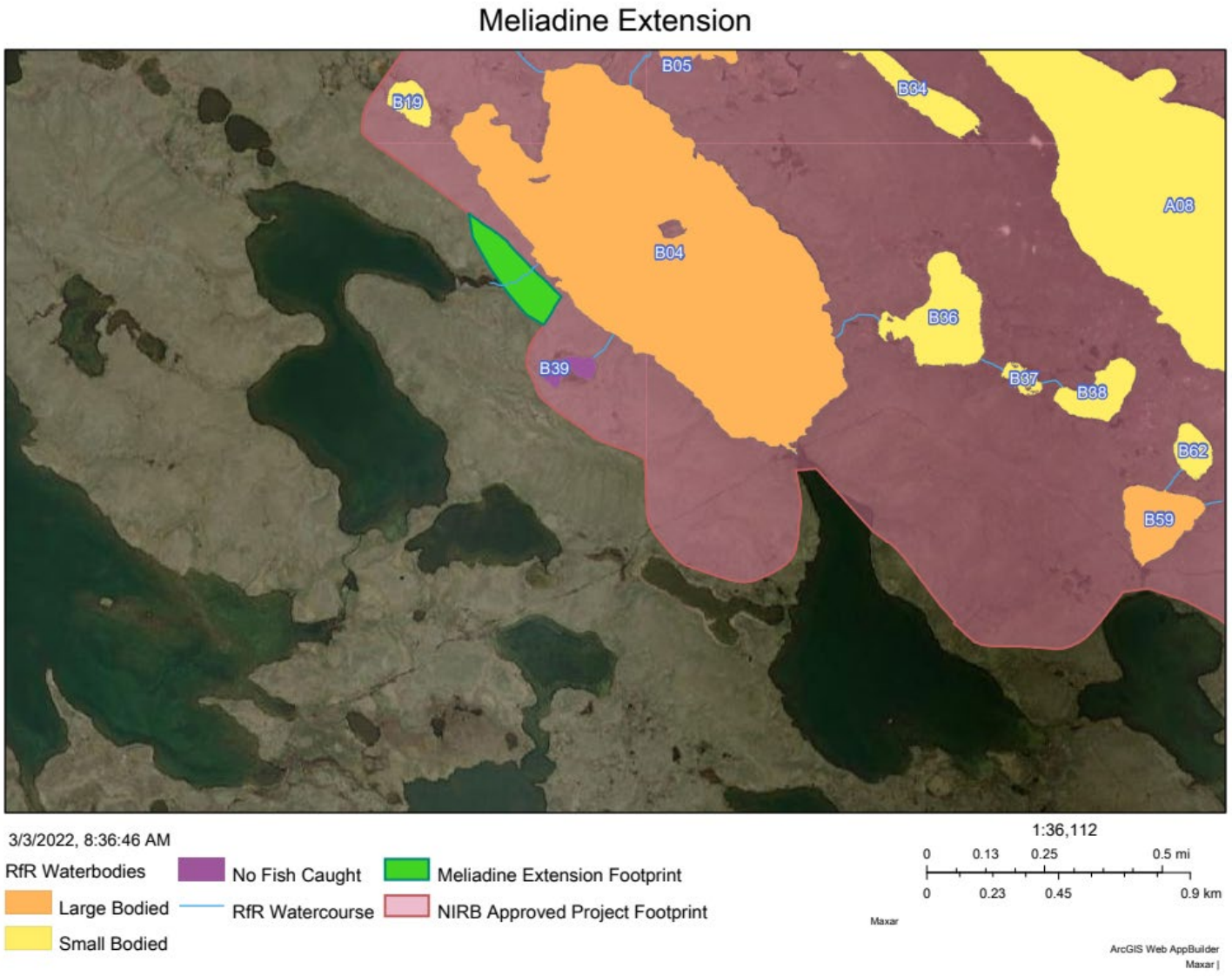


Figure D-15: Areas of Potentially Affected Fish Habitat

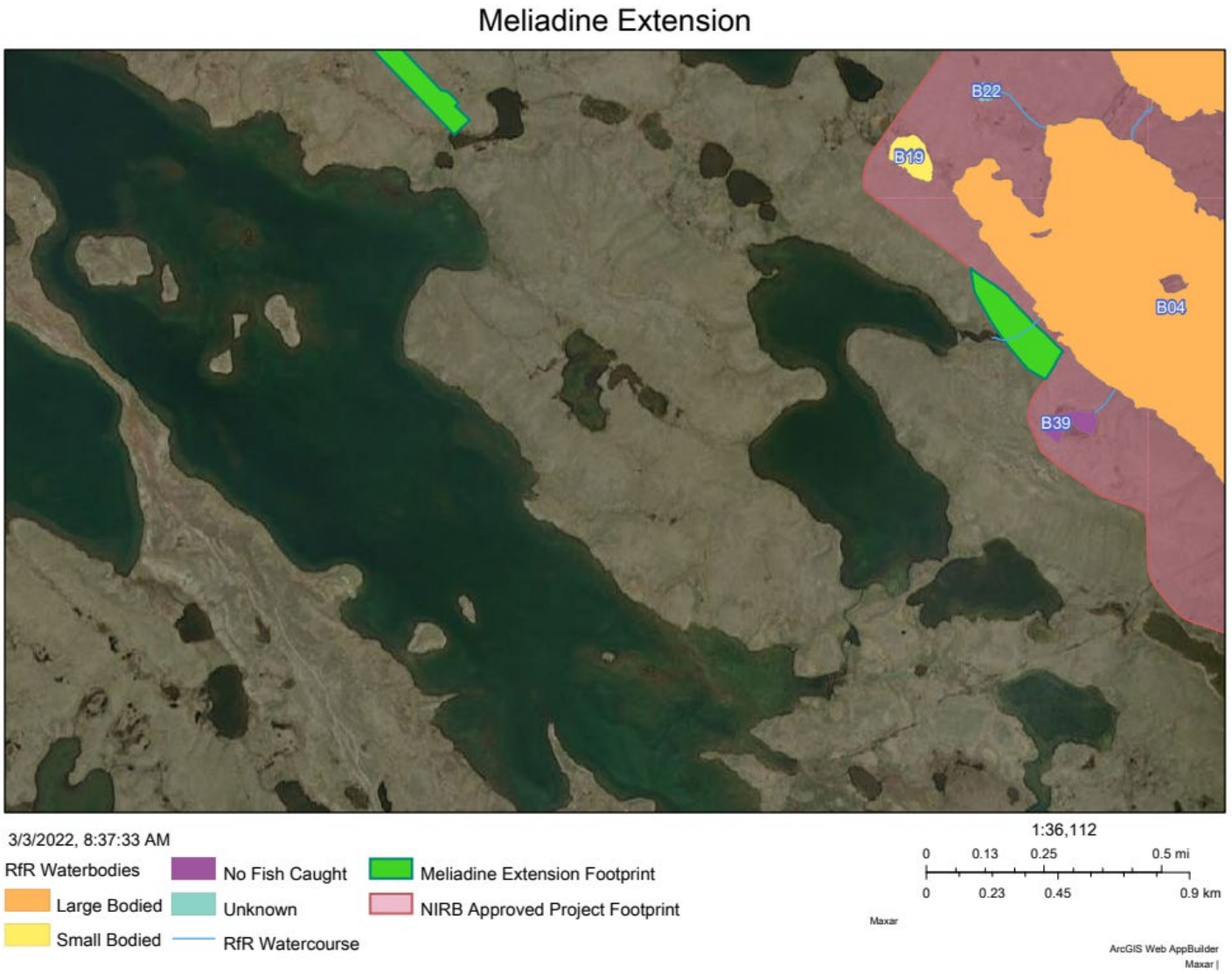


Figure D-16: Areas of Potentially Affected Fish Habitat

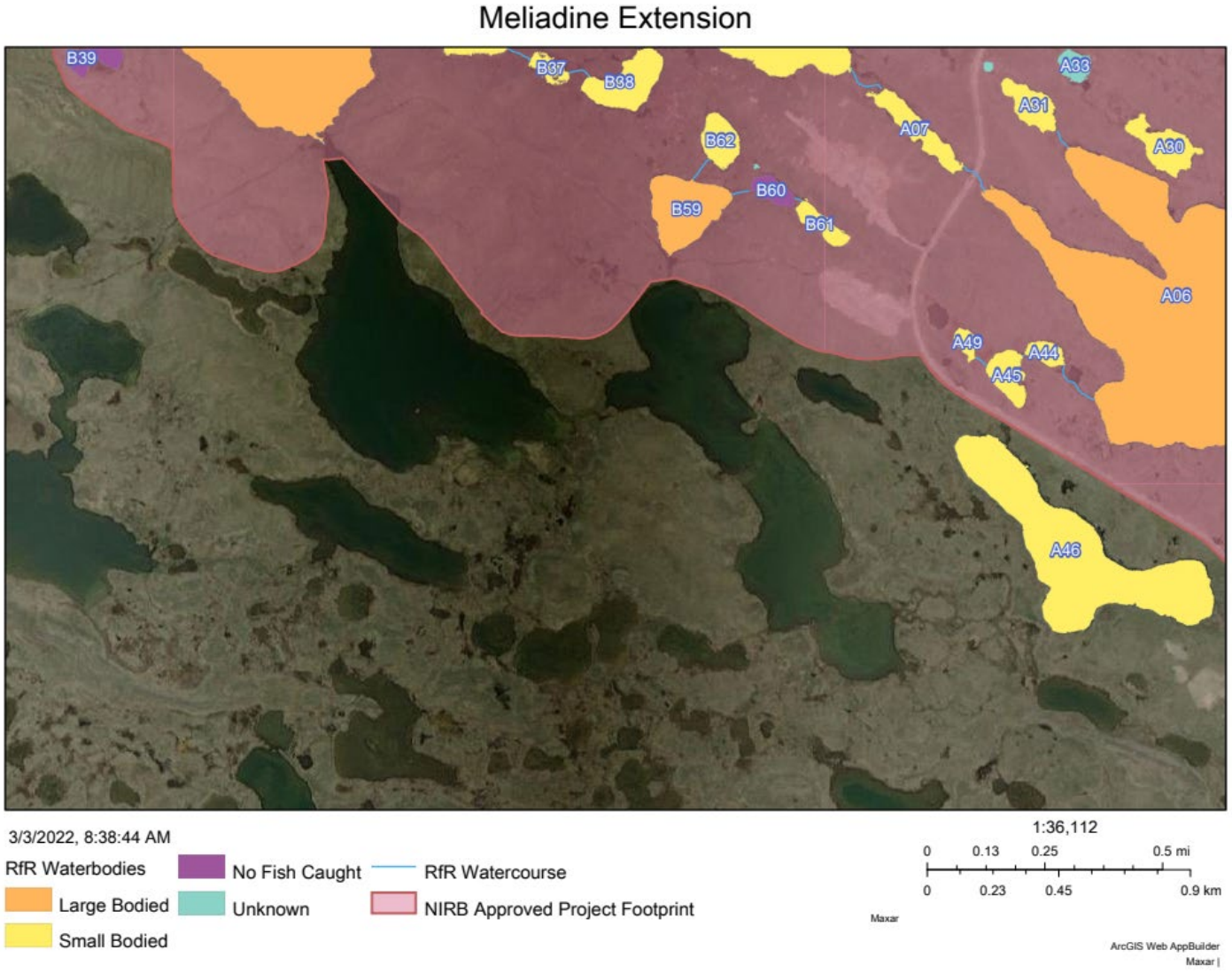


Figure D-17: Areas of Potentially Affected Fish Habitat

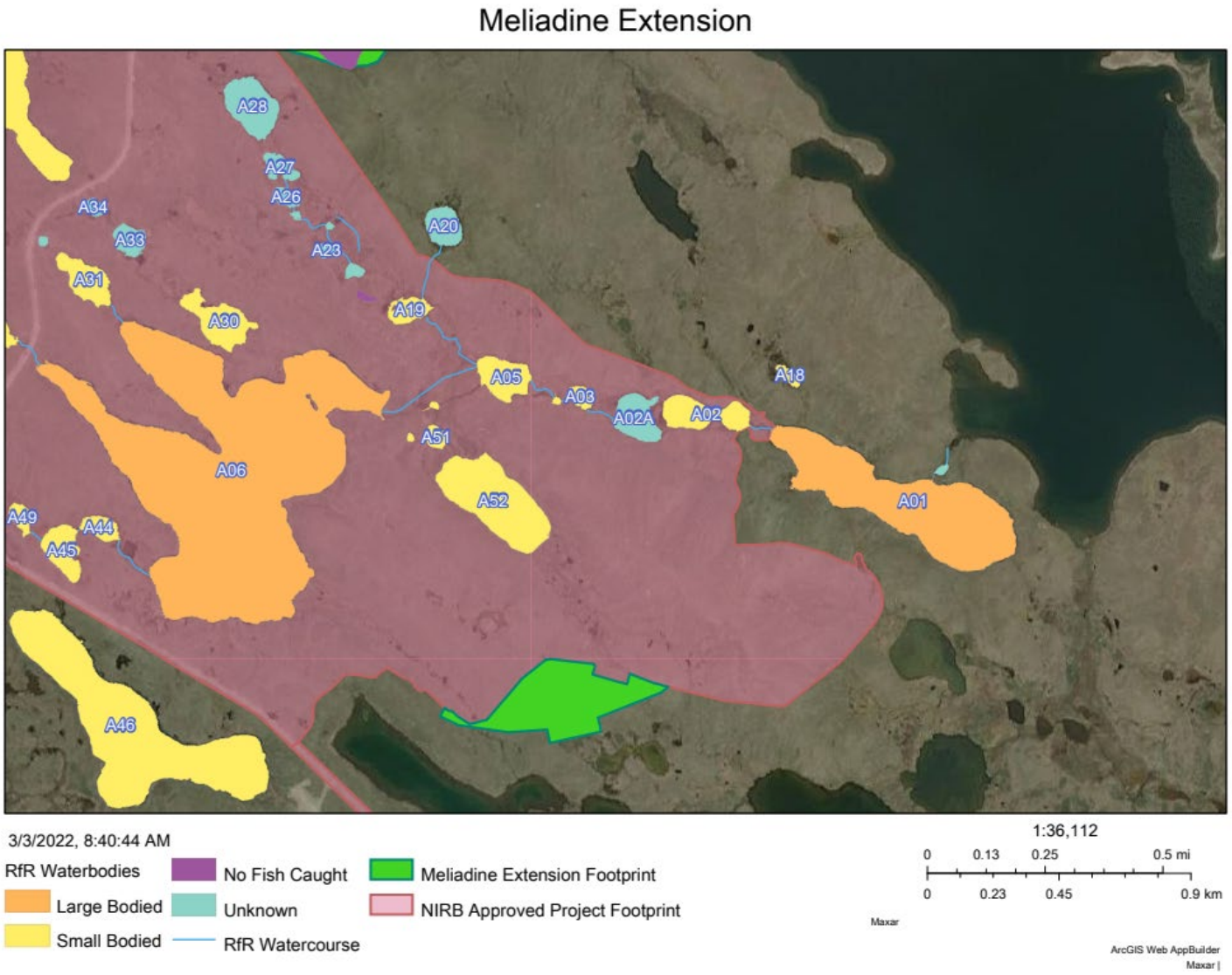


Figure D-18: Areas of Potentially Affected Fish Habitat