

Supplemental Information

USACE Block 17 Directions to the Site:

The subject property project is a 46-acre site within the Federal Conveyed ANCSA Land Kikiktagruk Inupiat Corporation on the western shoreline of Hotham Inlet (Kobuk Lake) and on the eastern side of Baldwin Peninsula. The site is located approximately 1.5 miles south of Pipe Spit and approximately nine miles east of the City of Kotzebue, Alaska (Sheet 1), located within Section 36, Township 18 North, Range 17 West, Kateel River Meridian, Alaska; Northwest Arctic Borough; Kotzebue recording district; USGS Quad Map Kotzebue D-1 NW (& D-1 NE), AK. The property is located at Latitude 66.91972°, Longitude -162.28693° (latitude longitude obtained from Google Earth; Sheet 2). The ice road runs west of the property through T18N R17W Sections 36, 35, 34, 33, 32, and T 17N R 17W Sections 5, 6, 7, 12.

USACE Block 18 Description of Proposed Action:**Ice Road Construction**

Kikiktagruk Inupiat Corporation (KIC) proposes to construct an overland ice road from Devil's Lake to Iggy Hill. This overland route is approximately 7.5 miles long and will serve as a haul route for gravel extraction activities at Iggy Hill. The route passes through lands owned by KIC and NANA. See Sheet 7.

The ice road from Devil's Lake to Iggy Hill will be approximately 30 feet wide and 7.5 miles in length. The overland ice road route is based on GPS coordinates. KIC intends to vary the location of the ice road by 30 to 50 feet each year so as not to concentrate the impact of the ice road on one specific route.

KIC will construct the ice road using Snow Packing Equipment, Volvo Water Buffalo or similar, Road Grader, 4-yard loaders, and Volvo Articulated Dump trucks if ice chips need to be hauled. As a guide, KIC will use a presentation titled "History of DNR Management of Ice Road Construction-Impacts of Different Construction Methods" by Gary Schultz, ADNR Manager.

Ice road construction is completed in two stages: snow compaction and water hauling. The ice road will be constructed by first packing snow with low-ground pressure equipment, which creates a depression in the snow and allows the wind to fill it back in. KIC will continue to pack and fill until the snow is dense and deep enough (6 inches) to start watering to create a solid ice road. KIC will also construct a temporary snow fence to capture blowing snow in areas requiring greater snow, such as creek crossings or exposed ridges.

Snow compaction in preparation for ice road construction will begin when at least three inches (3 inches) of snow is on the ground. Snow compaction will begin no earlier than October 15. Water hauling with Heavy Equipment will commence when the tundra temperature reaches -5 C (23 F) 10 inches below the surface and compacted snow or ice chips are six inches (6 inches)

deep. The use of the ice road will end on April 30 or earlier if the ice road conditions will no longer support traffic without damaging the tundra.

If additional snow is needed, it will be harvested from available snow disposal areas in Kotzebue.

Temporary Water Use

Five lakes are designated as water sources to construct the ice road. Sheet 7 indicates the location of each of these lakes. The water trucks that will be used will have a capacity of up to 4,000 gallons. Six-inch centrifugal pumps will fill the tanks at a rate of 1,000 gallons per minute. The pumps will have adequate suction and discharge hoses. Water usage is expected to reach up to 100,000 gallons per day, with an estimated total usage of up to two million (2 million) gallons. Estimated 20,000 gallons per lake for 10-14 days for usage. The initial construction period is estimated to take 10 to 14 days. KIC is applying for a temporary water-use permit from the Alaska Department of Natural Resources (ADNR) for up to two million (2 million) gallons.

Snow Fencing

A snow fence will be erected in places where natural snow deposits do not meet KIC's needs. The snow fence will be up to 5,200 feet long. Placement of the snow fence will begin on October 15 each year. The fence will be moved as snow is needed in specific locations and will continue to be in place at various points until the desired snow depth is attained. Low-ground pressure transport equipment will haul the fence material to the field. The stakes and fence will be installed with lightweight pneumatic hammers. The snow fence will be similar to the product shown in Figure 1.

The snow fence will be four feet (4 feet) high and held up by metal fence posts every six to eight feet (6 to 8 feet). The fence posts will extend about five feet (5 feet) above the ground. The fence will be mounted on the posts, leaving four to eight inches (4 to 8 inches) between the ground and the bottom of the fence. It will form the snow deposit along the ice road route. The fence will be located immediately adjacent to the road location. As adequate snow is compacted, the snow fence and posts will be moved to a new location along the route. The fence will have reflective tape installed to make it visible to off-road travelers. Every 100 feet, the snow fence will have a gap (approximately 20 feet) for animals and people to pass through. The snow fence structures are temporary fixtures and will be removed upon the completion of the road construction or when enough snow is deposited. Once road construction is complete, the snow fence and posts will be removed from the ice road route.

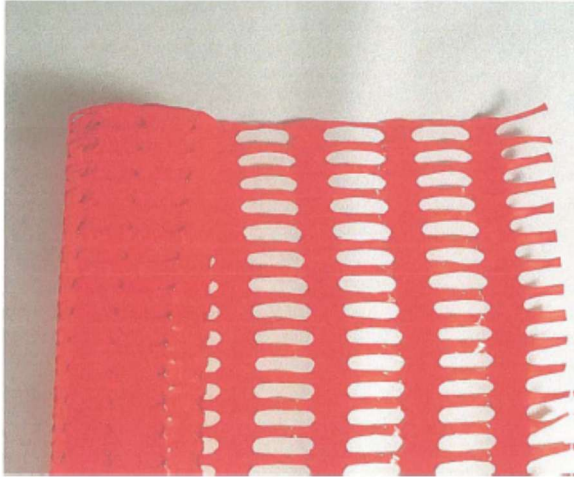


Figure 1: Snow Fencing ([http://www.grainger.com/product/9KDE5?cm sp=HIO- -HIDP- -BTM BTB P&cm vc=IDPBBZI](http://www.grainger.com/product/9KDE5?cm%20sp=HIO--HIDP--BTM%20BTB%20P&cm%20vc=IDPBBZI))

Gravel Extraction

KIC proposes extracting approximately 614,500 cubic yards of gravel and 435,900 cubic yards of overburden from the Iggy Hill material site. A 980 Excavator and a loader will be used for extracting material and loading dump trucks.

The excavation area is located along the 190-to-200-foot hillside of Baldwin Peninsula along the shore of Hotham Inlet. The total excavation cut will be 32.2 acres with an additional overburden stockpile area of 13.8 acres. The hill extraction area is flanked on the north and south sides by topography sloping away from the extraction site (Sheet 3) and down two swales that converge and then drop into the Hotham Inlet. Both swales have running water and open water in wetland areas at a site visit in June 2025. Aside from the very east side of the site, comprised of a steep bluff face dropping off to the Inlet, the entire area is mapped as an emergent wetland (National Wetland Inventory Mapping, Sheet 4). The face of the hillside consists of gravelly material along the course of the hillside (Sheet 2). Approximately 450 feet buffer will occur between the project area and Hotham Inlet shoreline. There are no alternate upland locations to store fill or overburden as all surrounding area is mapped as emergent wetland per NWI (Sheet 4). However, soil pits dug during a site visit in June 2025 indicated areas with lower water tables in higher topography locations. Extracting gravel in the winter and transporting via an ice road will minimize the transportation impacts and wetland impacts of the project.

The project location is in the Borough's Subsistence Conservation District and Kobuk-Selawik Lakes Subsistence sub-district.

Material extraction at the Iggy Hill site will occur between November 15 and April 30 of each season. All material extraction is to occur in the winter months. The mining season will be temporarily defined by 1) the completion of the seasonal ice road from Devil's Lake to the Iggy Hill site and 2) the degradation of the ice road due to rising temperatures during the month of April. All mining operations will cease during the summer months.

The heavy equipment's servicing, maintenance, and storage will be done at the heavy equipment facilities in the City of Kotzebue. All waste oil, coolants, and replacement parts will be disposed of through the City of Kotzebue's disposal services if they cannot be recycled. A 250-gallon portable wheeled fueling tank will be transported and placed at the site to fuel heavy equipment. There will not be any construction of any structures at the excavation site.

The excavation site will be sectioned off into four bench areas approximately 10 feet. See Sheets 5 and 6.

The perimeter will be staked to determine the top of cut. Organics will be removed and stockpiled separately as shown on Sheet C1.0. The overburden will be excavated down to the first bench working from the west to east, creating a working floor that is sloped to drain towards Hotham Inlet. As it is excavated down, the side slopes will be shaped to a 7 horizontal to 1 vertical slope. Organics will be placed on the slopes and the slopes will be seeded as necessary. The remaining benches will be worked in the same manner, east to west until all material is excavated. At the end of each season, the side slopes and stockpile will be seeded.

After the fourth and final bench is excavated, the silt overburden will be placed and shaped over the pit to reform the two drainage channels originally at the site. Organics will be placed on the shaped overburden pile, and dormant seed will be applied to the site.

Hauling Activities

KIC anticipates hauling up to 96 round trips daily from the Iggy Hill excavation site to an area designated by the City of Kotzebue and/or the State of Alaska. Most of the material excavated from Iggy Hill will be used to construct the proposed Cape Blossom Phase 2 or Phase 3 projects. Speed limits will be posted on the ice road, and drivers will be required to adhere to them. The final speed limit will be determined after construction is complete, so it is not possible to determine a maximum speed at this time.

Hauling equipment will not have covers, but material loading will be closely monitored to minimize material loss along the proposed route. Operators will be directed to center load and not heap loads to minimize the chance of spillage. As this is a winter haul, the material will be somewhat 'clumpy' due to the frozen nature of the material. KIC does not anticipate gravel loss as witnessed in summer hauls. When significant gravel spillage occurs, the spilled material will be recovered as soon as possible and hauled to the dumpsite using a grader and loader.

Project Schedule

Ice road construction will begin October 15 of each season, and the use of the ice road will end April 30 of each season, depending on ice conditions.

It is anticipated that material extraction will occur from 2025 to 2030. Material extraction is estimated to begin on November 15 and end on April 30 each year. All material extraction will occur in the winter months. The mining season will be temporarily defined by 1) the completion

of the seasonal ice road from Kotzebue to the Iggy Hill site and 2) the degradation of the ice road due to rising temperatures during the month of April. All mining operations will cease during the summer months.

Equipment

Equipment Type (Gravel Pit)	Quantity
450 D Cat	1
Loader	1
Peterbuilt dump trucks	3
980 Excavator	1
250-gallon portable wheeled fueling tank	1
Road grader	1
Bulldozer (D8 tractor)	1
Off-road dump truck	2
Dozer with ripper	1
Pickup	1
Backhoe	1
Sand and Gravel Processing Plant	1
Equipment Type (Ice Road)	Quantity
5 Cubic-yard loader w/blower & Blade	4
Blade (grader)	1
Ice Grinder	1
Water Pumps	4
Water Truck(s)	unknown
Light Plants	unknown
Equipment Type (Hauling and Service)	
Volvo A35/40 Series Articulated Dump trucks or similar	4
End Dump and pups (back up)	3
Pickups (Crewcabs)	6
Fuel Truck	1
Mechanic Truck	1

USACE Block 19 Project Purpose

The purpose of this project is to extract gravel material for infrastructure projects in the Kotzebue area and to construct an overland 7.5-mile-long ice road from the Iggy Hill site to Devil's Lake near Kotzebue. The proposed project includes the extraction of sand and gravel material from freshwater emergent wetlands with vegetation consisting of grasses and tundra

(Sheet 4).

USACE Block 23 Description of Avoidance, Minimization, and Compensation

AVOIDANCE

Material extraction is to take place within wetlands and in accordance with the U.S. Army Corps of Engineers permit requirements. Complete avoidance of wetlands is not practicable to accomplish the purpose and needs of this project. The project requires excavation in freshwater emergent wetlands to extract suitable sands and gravels for the construction of regional projects. The applicant has ownership of the property and subsurface. The subject property is in a remote location with access to the site by ice road only in the winter.

Wetlands are located on the subject property, and avoiding all wetlands to meet the project's purpose and needs is not practicable. Project alternatives (detailed in the Alternative Analysis, Appendix A) include development of a gravel pit in Kotzebue. Continued use of Nimiuk Point gravel mines, Noatak River Gravel Mine, Sadie Creek Upland Beach Berm, Sadie Creek Sand and Gravel Extraction, and the currently proposed Iggy Hill Gravel Mine site were evaluated to identify the most practicable alternative after taking into consideration site logistics, Alaska Department of Transportation (ADOT) construction requirements, noise pollution, and the overall project purpose. Alternatives were considered, with the current proposed project being the most reasonable and practicable alternative the volume of gravel needed for this project.

MINIMIZATION

The proposed site's selection is based on utilizing the applicant's property, with an extraction site of 32.2 acres

To further minimize impacts to the waters of the U.S., the project is designed to reduce wetland impacts to the greatest extent practicable. Complete avoidance of wetlands is not practicable to accomplish the purpose and needs of this project. To minimize the impact of this project on the environment, the following measures are proposed:

- Excavating during the winter months to haul material out on an ice road.
- The proposed project will follow any necessary USFWS and NOAA Fisheries recommendations to avoid disturbing migratory birds or Threatened or Endangered species.
- The proposed project will follow any necessary USFWS and Marine Mammal Protection Act recommendations to avoid Polar Bears, including using the Polar Bear Interaction Guidelines.
- Project activities will attempt to avoid any water bodies.
- There are no known Historic Properties.
- The limits of extraction will be clearly identified in the field prior to extraction to ensure the

- permitted project footprint is not exceeded during development.
- Extraction will occur in four phases, one bench at a time, until all usable material is exhausted.
 - Movement of construction equipment would be restricted to within the identified project boundaries to minimize disturbance to native vegetation.
 - Stockpiles, if any, would not occur in wetlands that are not proposed for permanent fill placement and would be covered to protect from stormwater runoff.
 - Overburden would be separated into mineral and topsoil/organics and seeded after each year.
 - The aquatic site features are limited to seasonal springs and flowing water through the two drainage swales and their associated wetlands. Standing water does not occur in the higher wetland areas. These higher areas are mapped as wetlands due to histic (high organic matter) soil properties and perched water table from permafrost, as noted from soil pits dug and described during a site visit on June 15, 2025.
 - Massive ice rich soil will be over excavated and removed. The excavated areas will be backfilled and sloped to drain to avoid ponding water.
 - Concerns that the mine area will potentially create high absorptivity conditions from exposed permafrost which could initiate thawing and slumping will be addressed by flattening the excavated slope to increase the slope stability thereby reducing the potential for unstable thawed slopes. A 2025 Geotechnical Analysis recommended increasing the cut slope to 7 horizontal to 1 vertical. The mine area will be sloped to sheet drain toward existing drainage features and prevent ponding water.
 - Site reclamation will not include developing ponds or standing water as the site does not currently support these. Additionally, the 2025 geotechnical analysis recommended ponding water could destabilize the soil.
 - Excavation will occur in benches. Each bench cut will be approximately 10 feet high. Excavating in benches reduces buildup of unconsolidated material at the side of the cut.
 - BMPs (as described in the Reclamation Plan) will be installed and implemented to minimize the introduction of additional suspended sediment into wetlands and the Inlet and include (see Site Sheet C1.0-C1.4)
 - Fiber rolls for sediment control
 - Check dams to slow water flow
 - Permanent riprap drain flumes
 - Diversion dams
 - Planting dormant cuttings of native shrubs
 - Sprigging of native plants
 - All refuse, garbage, or debris created during activities will be removed and disposed of at an approved facility.
 - The site area is within wintering caribou grounds. The Project will follow a plan for mitigating truck-caribou interaction on the ice road. Hauling activities will stop during caribou migration periods. Operation ceases for a week during peak migration, traffic halts if caribou within 300 feet of road until it crosses, or 15 minutes. Two people will monitor road during migration.

COMPENSATORY MITIGATION

A search of the USACE Regulatory In-lieu Fee and Bank Information Tracking system listed no wetland mitigation banks or in-lieu-fee programs for this primary or secondary area.

Reclamation

Implementing stabilization and reclamation procedures for the material source area is detailed in the Iggy Hill Sand and Gravel Mine Reclamation Plan.

USACE Block 25 Adjacent Landowners

Adjacent Landowners for Project Area:

Extraction Site: T18N R17W Section 36: KIC (P.O. Box 1050. Kotzebue, AK 99752-1050)

Ice Road

T18N R17W Sections 36, 35, 34, 33, 32: KIC (P.O. Box 1050. Kotzebue, AK 99752-1050)

T 17N R17W Sections 5, 6, 7 and T 17N R18W Section 12: NANA (PO Box 49 Kotzebue, AK 99752)