APPENDIX W

Barge Plans

- Barge Grounding and Response Plan, October 2013.
- Barge Communication Plan, February 2018.

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Technical Memorandum: Proposed River Barge Stranding Response Methodology

From: James Fueg, Study Manager
To: Nick Enos, Permitting Manager
Date: October 28th, 2013

As requested by USACE, this memo provides a high level overview of the proposed response methodology for stranded cargo and/or fuel barges during the construction and operation of the proposed Donlin Gold Project. A summary of historical stranding data is also provided, including the single documented stranding of a fuel barge in the Kuskokwim River.

Stranding Response

The Donlin Gold operation is anticipated to require a total of at least 8 fuel barges, 8 cargo barges, and 4 tugs (comprising four separate tows of one tug with four barges) to supply the required fuel and consumables annually. A detailed description of the operation was included in *River Barge Fleet Design and Operation* report provided to USACE on July 3. All of the described equipment would be dedicated to Donlin Gold's operations during the summer season and therefore would be available to assist in the event of a stranded barge.

The barge plan includes a loading system that is designed to anticipate upstream water depth and load the barges accordingly. The plan also includes periodic surveying of the active channel, real-time tracking of tow locations and water depths, electronic charts that will be updated after every trip from the on-board systems, and system navigation aids that will include buoys and radar reflectors. Therefore, the most likely scenario for stranding is when a barge captain strays from the surveyed channel due to a navigational error. In this case, an empty tow traveling down the river would be

available to assist, as needed. In the event of a stranding in the active channel, equipment would be mobilized from the lower port site, or elsewhere on the river, to assist as needed.

The steps that would be taken in the event of a stranding are as follows:

1. Separate and secure any barges still floating to a secure location where they would not impede the flow of traffic on the river. Once this has been completed, the tug and crew would then focus on the stranded barge.
2. Check river conditions and determine if the water depths are rising, falling, or static. In the event of rising water conditions, the crew may elect to wait a short period to see if rising water floats the barge free.
3. If water depth is falling, or static, or the water is not rising fast enough, then the next step would be to attempt to pull the barge free using the available tug. This step would be dependent on the nature of the stranding and the river bed conditions. Additional tugs could be utilized to assist in pulling the barge as needed.
4. In the event that river bed conditions and/or other factors preclude pulling the barge free, or the tug is unable to free the barge, the next step would be to bring an empty fuel barge (equipped with a pump for fuel transfer) or cargo barge (equipped with a crane or other equipment for transferring cargo), as appropriate, alongside the stranded barge and begin lightering fuel or cargo across to the empty barge until the stranded barge is refloated. All appropriate spill containment measures (booms etc.) would be implemented prior to lightering any fuel.
5. Once enough cargo has been removed from the barge it will refloat. In extreme cases the empty barge may be pulled free using a tug. As these barges would be designed for storage on the river bank during the winter season when the river is frozen, the barges would be structurally strong enough to withstand being pulled free. Freed barges would be inspected and repaired, as needed, before being placed back into service.

Historical Stranding Data

Cargo Barges – We are aware of no requirement to report and track stranding information for cargo barges on the Kuskokwim River. So, while there is anecdotal evidence and informal reports of stranding, no documented statistics appear to be available. Based on anecdotal reports, many of the cargo barge strandings on the Kuskokwim have been associated with barges operated on a "tramp" basis, loading and transporting cargo as available, with little planning for anticipated river conditions. In particular, gravel barges are apparently fully loaded with material and dispatched without planning for anticipated river conditions. Many of these barges are associated with single equipment operators who do not have access to additional equipment in the event of a stranding. These standings appear to often occur when barges are headed downstream at speed, with full loads. Anecdotal evidence is that when gravel barges are stranded their loads are typically dumped into the river to refloat the barge. When cargo barges are stranded, there is often no available equipment to lighter to, and consequently they remain stranded until water levels rise and they refloat, or equipment becomes available to unload them. These current management practices for cargo barging on the Kuskokwim are not regarded as good analogs for the proposed Donlin operation.

Fuel Barges – Our understanding is that there is a requirement to report the stranding of fuel barges, regardless of whether or not any product was spilled. Records related to incident response and/or fuel spills are maintained by several agencies, including the National Oceanographic and Atmospheric Association (NOAA), the Alaska Department of Environmental Conservation (ADEC), and the United States Coast Guard (USCG). Fuel barges are typically loaded with a specific destination and cargo volume in mind, travel upriver loaded, and return down river empty. As such, the current management of fuel barging on the Kuskokwim is a better analog for the proposed Donlin operation. A search of the NOAA, ADEC, and USCG databases resulted in the identification of a single stranding of a fuel barge in the Kuskokwim River region since the early 1980's, which took place near Quinhagak, south of the mouth of the river. There is anecdotal evidence

of another fuel barge stranding that occurred near McGrath, however there is no record of any spill or associated activity and it is assumed that the barge was simply refloated by rising river conditions. The response to the Quinhagak incident involved lightering fuel from the stranded barge as described above. The incident report extracted from the NOAA database is presented below.

Crowley Barge 160-1 Quinhagak Incident

"Crowley Barge 160-1 ran aground near Quinhagak, AK, just south of the mouth of the Kuskokwim River on Sept. 16, 2009, as the result of navigation error during a normal fuel delivery to the village of Quinhagak. The barge has 72,000 gallons of gasoline and 72,000 gallons of Jet fuel. The barge is a 1968 single skin barge. The grounded barge had gone through two tidal cycles, during which the tug could not pull it off the bottom, prior to notifying CG Sector Anchorage on Sept. 17. No fuel has been released into the environment. The CG requested that the NOAA SSC provide weather and tidal information. Shortly after the grounding a second barge, the OB-5, was summoned from Bethel 80 miles to the north. Barge OB-5 was able to liter 60,000 gallons of Jet fuel from barge 160-1 and delivered 55,000 gallons to tanks at Quinhagak. Upon returning to 160-1, barge OB-5 itself grounded just west of the location of the 160-1. When OB-5 refloated on a subsequent high tide, it was directed to stand by offshore as it had too much draft to conduct further work in the mouth of the Kanektok River. Crowley summoned another barge from Nome to complete the litering of the still grounded 160-1. The combination of a spring tide and a strong westerly wind produced enough water under the barge to refloat it spontaneously very early on Sept. 22. The barge was towed to the Quinhagak tank farm where it transferred all its remaining cargo with the exception of 5000 gallons of jet fuel. It subsequently was directed to Bethel where it will be inspected by the Coast Guard. Thus bringing an end to the incident."

Summary

Donlin Gold's barge plan includes periodic surveying of the active channel, and a loading system that is designed to anticipate upstream water depth to load the barges accordingly. Donlin would also utilize best practice with respect to navigation aids and

operating procedures. Equipment would be dedicated to Donlin Gold's operations during the summer season and available to mobilize in the event of a stranded barge. In the event of a barge stranding, Donlin Gold would have a number of methods available to free the barges, depending on the circumstance. Equipment would be available to unload or lighter the stranded barge in order to refloat it.

While it is acknowledged that there are known occurrences of cargo and gravel barges stranding on the river, no statistics are available. There is one recorded stranding, and one other anecdotal report, of a fuel barge stranding on the Kuskokwim River. Neither of these occurred in the stretch from Bethel to Jungjuk Creek that is proposed for the Donlin barging operation. There are no recorded fuel spills associated with barge stranding on the Kuskokwim River.

BARGE COMMUNICATION PLAN

Donlin Gold Project

February 2018

(Revision 1.1)

4720 Business Park Blvd. Suite G-25
Anchorage, Alaska 99503

Prepared in Consultation with:

Donlin Gold Advisory Technical Review and Oversight Committee (DATROC)

TABLE OF CONTENTS

APPENDICES

FIGURES

TABLES

1.0 INTRODUCTION

This Barge Communication Plan (plan) describes the communication elements to keep individuals and communities informed regarding regular barging activities in the Kuskokwim River and Kuskokwim Bay. This plan does not include communications during emergencies.

This plan has been prepared by Donlin Gold LLC (Donlin Gold) and the Donlin Gold Advisory Technical Review and Oversight Committee (DATROC) with the technical expertise of barge operators, and in consultation with knowledgeable Kuskokwim River and Kuskokwim Bay local residents (stakeholders). The DATROC is an advisory committee formed by Calista Corporation, The Kuskokwim Corporation (TKC), and Donlin Gold. The plan describes the key communication elements to keep individuals and communities informed; presents opportunities for stakeholders to participate in planning; and provides methods to resolve potential conflicts or concerns as they arise. The conflict and concern resolution approach is much like the methods used in other industries, such as aviation transportation. Future development of this plan will be accomplished through adaptive management. This plan will be revised as needed, and implemented before barging activities begin in the Kuskokwim region.

1.1 Transport uses of the Kuskokwim River

Freight movement is important for the well-being of communities in the Kuskokwim River region. The unique geography, and the lack of village connections to the state road network, require that basic goods, materials, and fuel be brought in by barge or aircraft. The majority of the freight brought to the region is via barge through the Port of Bethel and up the Kuskokwim River (ADOT&PF 2017). Between 2007 and 2011 the number of inbound and outbound self-propelled vessels annually ranged between 73 and 142. In 2006, the Port of Bethel reported 87,000 tons of commodities landed, of which 77,000 tons were fuels (USACE 2017). However, Lynden, Inc. (Lynden), the largest marine cargo transporter in Alaska, has stated that roughly 50,000 tons of commodities are annually offloaded to the Port of Bethel (Lynden 2017). Approximately 68 freight fuel-barge tows per year serve the villages upriver of Bethel (USACE 2017). Donlin Gold anticipates operating 4 barge-tows during operations, 2 for cargo and 2 for fuel with one barge-tow set being loaded or unloaded at any given time and the other 3 in transit.

Large vessels have moved cargo along the Kuskokwim River since the early 1900s, with the introduction of steamboats to support gold exploration in the region (Brown 1985). Steamboats moved cargo along the river and made connections with ocean-going vessels in Bethel. During the 1920s and 1930s, upriver tonnage consisted primarily of fuel, dredged material, and food. Downriver tonnage consisted of ore from the Nixon Fork mines. Diesel tugs replaced steamboats in the 1950s, and by the early 1960s, at least 10 boats (ranging in length from 50 to 125 feet [ft]) and 20 barges operated in Bethel (Brown, 1985). Current and past barging operations in the region have done little in terms of communication with other river users, yet barging and other uses of the river have coexisted with little or no impact to subsistence activities or access to subsistence resources.

1.2 Traditional uses of the Kuskokwim River

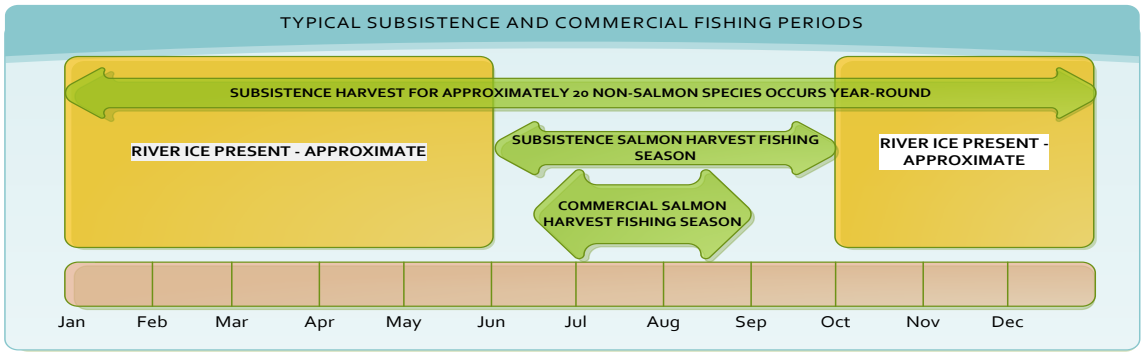
The Kuskokwim River ("Kusquqvak" in Yup'ik) is of great importance to the residents of western Alaska, who rely on the river for subsistence hunting, fishing, and gathering for nutrition, and to support their transportation needs and traditional way of life (ADF&G 2012). "*It is the Kuskokwim River that connects our lands, our families and our values*" (TKC, 2012). Food harvested generally includes, but it is not limited to: salmon species, moose, whitefish species, northern pike, geese, ducks, wild berries, and wild greens (ADF&G 2012). The Kuskokwim River also supports limited commercial fishing.

Subsistence fishing in the Kuskokwim River includes the harvest of salmon (Chinook, coho, sockeye, pink, and chum) and non-salmon species (mainly sheefish, broad whitefish, humpback whitefish, Bering cisco, rainbow smelt, and northern pike). Subsistence salmon harvesting occurs between early June and late August (Figure 1). Non-salmon subsistence harvests occur year-round (Figure 1), although fall is most important. Typical methods of subsistence fishing are subject to regulatory restrictions and include drift and set gillnets, dipnet, beach seine, fish wheel, and rod and reel.

Commercial fishing activities take place in two distinct districts: District W-1 extends from the mouth of the Kuskokwim upstream to near Tuluksak; and District W-2 starts near Lower Kalskag and extends upstream to Crooked Creek. District W-1, has had commercial openings on record since 1995. For the period 1995 through 2013, the average start of the season in District W-1 is July 5, with the earliest start date on June 17, and the average end date is August 24, with the latest opening date occurring on September 9 (Figure 1). District W-2 has not had an open salmon fishing season since 2000. In District W-2, commercial fishing equipment is limited to set gillnets and drift gillnets.

Drift nets are the most prevalent gear type used to harvest salmon in the Kuskokwim River, because drift nets fit current fishing practices that emphasize harvesting multiple salmon species, flexible fishing schedules, and fishing from the village instead of a fish camp. The potential for impacts from barge operations is greatest when barges pass drift nets, because of net placement in the active navigational channel (USACE 2017). General historic locations of net sites are depicted on a figure included in Appendix A. Both the subsistence and commercial fishing activities are heavily influenced by salmon run strength and closure orders designed to meet salmon escapement goals. In summary, management practices for the Kuskokwim River put highest priority on subsistence fishing.

Figure 1 – Typical Subsistence and Commercial Fishing Periods



2.0 GOALS AND OBJECTIVES

The goals and objectives of this plan are:

Goals:

- Effectively communicate Donlin Gold barging plans to our stakeholders in the Kuskokwim region, with transparency, for the safe and continuous practice of barging and subsistence activities

- Establish a method for conflict resolution, should this occur.

Objectives:

- Describe the communication elements to keep stakeholders and communities informed of barging activities in the Kuskokwim River and Kuskokwim Bay.

- Provide opportunities to the Kuskokwim region stakeholders to participate in meaningful planning and decision-making.

- Identify Kuskokwim River areas or locations of potential conflict with subsistence users.

- Establish a method of communication between stakeholders, barge operators, Donlin Gold, and the DATROC to address potential conflicts and concerns as they arise.

3.0 COMMUNICATION

The Donlin Gold Draft Environmental Impact Statement (EIS) determined that the potential for river barges to impact subsistence fishers is greatest when barges pass drift nets, particularly in the in shallow and narrow reaches of the river, such as: Aniak; Birch Tree Crossing; and the Upper Oskawalik area (USACE, 2017). Subsistence users have already adapted their fishing techniques to existing barging activity by either trying to drift before the barge passes or wait until the barge has passed (USACE, 2017). The EIS suggests that communication strategy that keeps subsistence users informed of barge schedules and traffic updates would allow users to meet their harvest goals (USACE, 2017). The following communication processes and procedures were developed to help local residents plan their activities around barging to minimize potential impacts to subsistence activities.

3.1 Community Meeting Plan

Donlin Gold plans two annual community meetings (pre-barging and post-barging) in both Aniak and Bethel for residents of the Kuskokwim River. The pre-barging meetings will be held to inform the potentially affected stakeholders and communities of the Kuskokwim region about barging plans in the upcoming season. The post-barging meetings would occur after the barging season, to debrief stakeholders of the barging operations, and to gather stakeholder and community feedback. Barge captains will be invited to all meetings and interested participants will be able to attend in person or via phone.

The general agenda and topics of the meetings would be as follows:

- Pre-barging Meetings
    - Present barging plans for the upcoming season (e.g., estimated start date, number of barge loads for cargo and fuel)
    - Present, if applicable, the changes to the Barge Communication Plan (or other plans) as a result of the adaptive management process (Section 8.0)
    - Present communication strategies in the river between barge operators and stakeholders
    - Present established methods to address potential stakeholder conflicts and concerns, should they arise
    - Present other methods to obtain up-to-date information on barging plans and barge locations
    - Provide an open forum for stakeholders to provide advice, ask questions, or raise concerns about the upcoming barge season
    - Display maps showing the locations of important subsistence areas for the Kuskokwim River and Kuskokwim Bay to support discussions and address updates, as needed.
- Post-barging Meetings
    - Present barge work accomplished during the season
    - Present summary of subsistence conflicts or concerns reported through the season (if any)
    - Update on specific-issue monitoring (as needed, see Section 6.2)
    - Stakeholders will be asked if they observed any effects of barging activities on subsistence. Any subsistence effects reported, either by contact with the Donlin Gold community liaisons (Donlin Gold Village Representatives, see Section 6.2) or identified in community meetings, will be evaluated as discussed under Conflict Resolution (Section 6.0)
    - Provide an open forum for stakeholders to provide advice, make suggestions, ask questions, or raise concerns, about the completed barge season
    - Display maps showing the locations of important subsistence areas for the Kuskokwim River and Kuskokwim Bay to support discussions and address updates, if needed.

The place and time for each meeting will be announced at least 14 days prior to the event via public radio (radio station KYUK), social media, and via email to stakeholders who have requested receipt of such notices and provided contact email addresses to Donlin Gold (i.e., “registered” stakeholders).

This Community Meeting Plan can be modified, increased, or suspended, based on meeting usefulness through adaptive management (Section 8.0).

3.2 Additional Barging Status Updates

During barging operations, Donlin Gold will update Kuskokwim region stakeholders and communities through informal meetings and other communication methods such as:

- Including barging operations as agenda items in other community meetings, as practicable
- Donlin Gold newsletters
- Donlin Gold website
- Social media
- Via email to registered stakeholders.

3.3 Barge Location Information System

A system to view the current location and movement of Donlin Gold project barges will be available via the internet and will be accessible via desktop computer or smart phone. The barges will be equipped with transceiver units that will send wireless data that include the vessel identification name, time, date, location and direction of travel.

3.4 Stakeholder Communication with Barges

Stakeholders will be able to communicate with the barge captains via VHF radio on the channels listed in Table 1, or via cell phone (where service coverage is available). Each vessel will have a cell phone number visible on the side.

Table 1 – VHF Communication Channels

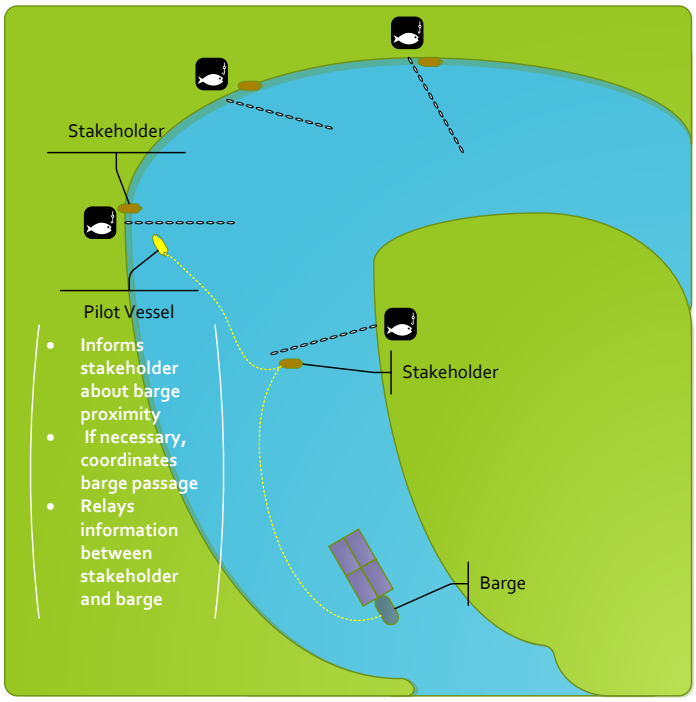
Use	Channel	Notes
Vessel to Vessel	06	Communication restricted to navigation safety between vessels
Vessel to Shore	[TBD]	Communication between vessel and shore

3.5 Barge Communication with Stakeholders

Each barge tow will be equipped with a skiff (pilot) vessel that can be rapidly deployed when the barge captain deems it necessary by the circumstances of the case, such as when navigating through challenging or congested waters (Figure 2). The pilot vessel can travel ahead of the barge to observe the river conditions or subsistence activity. As necessary, the person operating the pilot vessel may: inform subsistence stakeholders of the proximity of the barge, and determine if stakeholder(s) can take avoidance actions; inform the barge captain of the proximity of subsistence activity, so the barge captain can take avoidance actions, if practicable; mediate and coordinate between the barge captain and the affected stakeholder regarding the barge passage actions; or take other action, as necessary, to

coordinate the safe passage of the barge, and secure the safety of the stakeholder or his/her property. If available, Yup'ik-speaking crew(s) would operate the pilot vessel.

Figure 2 – Barge Communication with Stakeholder Using Pilot Vessel



4.0 NAVIGATION

As a matter of law, the Donlin Gold barges must adhere to U.S. Coast Guard (USCG) Navigation Rules. The Navigation Rules are much like the rules of the road on a highway. They establish a consistent way to navigate safely and avoid collisions when two boats are crossing paths, meeting each other from opposite directions, or when one boat operator wishes to overtake another. USCG Navigation Rule 9 regarding navigation in "Narrow Channels" is of important relevance for the safe navigation in the Kuskokwim River and Bay. Barges, because of their size, are limited to operating within a narrow channel of the river for safe navigation, and will have the right-of-way with respect to smaller vessels; however, the pilot vessels will follow the procedures set forth in Section 3.5 to reduce right-of-way conflicts and concerns. The full content of Navigation Rule 9 is provided as Appendix B. Implementation of this Barge Communication Plan is designed to avoid and minimize conflict with other river users.

5.0 EMERGENCY ASSISTANCE

Consistent with Admiralty and Good Samaritan laws, the person in charge of a Donlin Gold vessel will render assistance to any individual found in the river or bay in danger of being lost (i.e., life-threating situation), so far as the individual in charge can do so without serious danger to the vessel or crew.

6.0 CONFLICT OR CONCERN RESOLUTION

This plan focuses on conflict avoidance through effective communication by means of meetings, barging activity updates, and in river communication between barge operators and stakeholders. Occasionally, there may be navigational events or circumstances that create a barging-related conflict or concern (issue) with stakeholders that could not be, or was not sufficiently addressed, by these practices. Donlin Gold is committed to resolving these issues with stakeholders. This is consistent with Donlin Gold's community relations policy. Donlin Gold encourages the region stakeholders to raise issues by following the procedure described below so that appropriate and timely resolution may be reached.

6.1 Process

The stakeholder conflict or concern resolution process (Figure 3) provides a structural approach to guide stakeholders and Donlin Gold managers in resolving issues and is the recommended method for resolution.

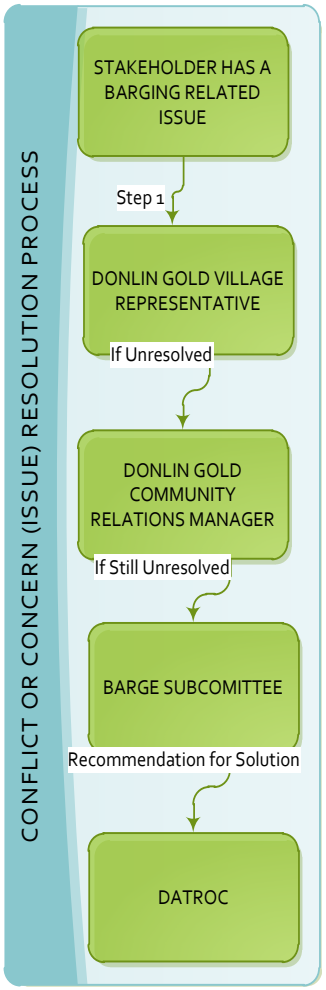


Figure 3 – Process

In the event of a barging-related issue, Donlin Gold encourages the affected stakeholder to contact a Donlin Gold Village Representative. In most situations, it is likely that the issue will be resolved with the Donlin Gold Village Representative. Donlin currently has a project representative in Aniak and one in Bethel. If it is not resolved with the Donlin Gold Village Representative to the stakeholder's satisfaction, the stakeholder or Donlin Gold Village Representative may escalate the issue to the Donlin Gold Community Relations Manager. If, after escalating the issue to the Donlin Gold Community Relations Manager the stakeholder is still not satisfied with the resolution, or if the dispute cannot be resolved through other established channels, the stakeholder, or the Donlin Gold Community Relations Manager, can escalate the issue to the DATROC Barging Subcommittee (DBS). The DBS will undertake a review of the escalated issue only after the stakeholder has actively sought to resolve the issue with both the Donlin Gold Village Representative and Community Relations Manager. If the stakeholder has not taken the steps outlined above, the DBS will redirect the stakeholder to the process to ensure that all attempts to resolve the issue have been explored before the DBS will consider the issue. After hearing the issue, DBS will determine if further action is needed and can make recommendations to be considered by DATROC and the project operator. Depending on the nature of the issue, the DBS may also direct the stakeholder to another established channel for resolution. Contact information for the above-mentioned positions is provided in Table 2.

Table 2 – Contacts for Issue Resolution Process

Title	Phone	Email
Donlin Gold Village Representative - Bethel	+1 (907) 543-0745	claraux@DonlinGold.com
Donlin Gold Village Representative - Aniak	+1 (907) 675-4416	wmorgan@DonlinGold.com
Donlin Gold Community Relations Manager	+1 (907) 569-0349	kparkan@DonlinGold.com
DATROC Barge Subcommittee	TBD	TBD
DATROC Barge Subcommittee	TBD	TBD

6.2 Donlin Gold Village Representatives and Community Relations Manager

For each issue reported, the Donlin Gold Village Representative and/or Donlin Gold Community Relations Manager will gather as much specific information as possible regarding the circumstances. Donlin Gold, will consult with the affected individual(s) (if required) to develop and implement a satisfactory action or remedy. Complex issues may require further study, and an appropriate monitoring plan could be developed and implemented in consultation with the DATROC, DBS, and other potentially affected parties. Donlin Gold will maintain a record of all barging-related issues raised by the public, and the resulting actions and remedies.

6.3 DATROC Coordination

The primary purpose of the DBS under this plan is to facilitate the resolution of barging-related complaints and concerns only after the stakeholder has actively sought to resolve the issue(s) with first the Donlin Gold Village Representative and then the Community Relations Manager. The structure of the DBS is currently in the planning stages. As currently envisioned, it will include of between 5 and 7 residents from villages along the river. The subcommittee will meet quarterly at a minimum. The meetings would be facilitated by a staff member from Calista or TKC. DBS will review escalated stakeholder barging issues at these meetings and, if appropriate, make a recommendation for DATROC and the project operator to consider for alleviating or minimizing conflict going forward. In this way, the DATROC represents a “channel of last resort” for stakeholders who believe their issues and complaints have not been properly addressed. The DBS has a secondary objective to identify and report on concerns and trends based on stakeholder barging issue reports; as well as to recommend solutions or areas requiring policy review by Donlin Gold management that would serve to improve stakeholder interest and relations, consistent with safe navigational practices.

6.4 Guiding Principles

The following principles will guide Donlin Gold and the DATROC in the conflict and concern resolution process:

- Treat stakeholders with respect and dignity.
- Address issues in a fair, timely and consistent manner.
- Work with stakeholders and other partners to mitigate the impacts of our operations.
- Maintain safe navigational practices at all times.
- Treat information collected by Donlin Gold and the DATROC with care and respect for privacy concerns. Disclosure outside of Donlin Gold and the DATROC will be limited to the full extent possible, unless necessary to facilitate the review and resolution of any stakeholder issue or concern.

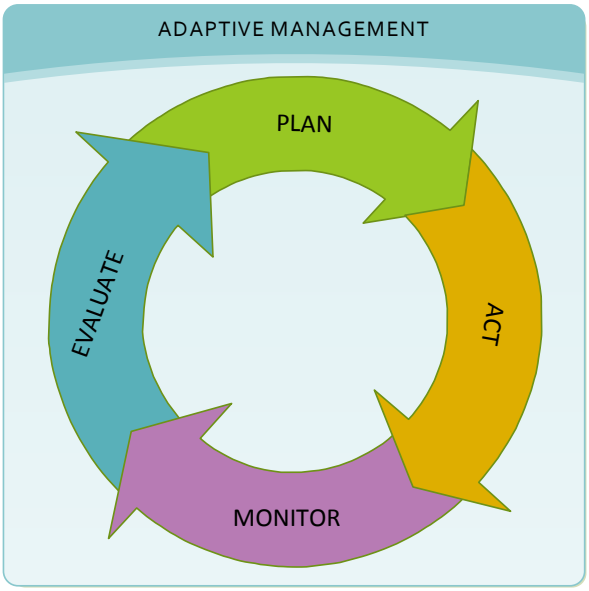
7.0 ENVIRONMENTAL AND CULTURAL TRAINING

Barge personnel will be trained to be aware of, and sensitive to, the Native cultural values held by the residents of the Kuskokwim River region. The training will include information concerning project mitigation and stipulations, required operating procedures and standards, and specific environmental, social, traditional, and cultural concerns to the region. The training will be prepared in coordination with the DATROC.

8.0 ADAPTIVE MANAGEMENT

An adaptive management process is necessary for the success of this Barge Communication Plan, due to some of the uncertainty of variables such as annual variability of the quantity and schedule of barging and subsistence activities, and other social factors. Adaptive management provides a structure and iterative process to assist decision-making when there is uncertainty in the process.

Figure 4 – Adaptive Management



The adaptive management process includes a four-phase cycle (Figure 4). In the first phase (Plan), plans are framed, based on existing knowledge, goals, and current technology. In phase two (Act), these “on-the-ground” action plans are implemented. Phase three (Monitor) involves monitoring results of these actions. In phase four (Evaluate), results are evaluated for effectiveness. The cycle could then reinitiate, driven by emerging knowledge and experience. Results will either validate existing practices and procedures or reveal the need

for alterations in the allocations, or both. A summary of the tasks described in this plan, and how they fit into the adaptive management structure throughout the year, is provided in Table 3. Furthermore, this plan can be incorporated or combined with other plans as necessary, for effective management, or terminated if deemed no longer needed through the adaptive management process, in consultation with the DATROC.

Table 3 – Adaptive Management Annual Tasks

Adaptive Management Phase	Timing	Tasks
Plan	Pre-barging season	Update Barge Communication Plan (as required)
Act	Pre-barging season	Announce and conduct pre-barging meeting
Monitor	Pre-barging meeting	Gather stakeholder feedback at pre-barging meeting Record stakeholder comments
Evaluate	Pre-barging meeting	Review stakeholder feedback at pre-barging meeting and revise barge plan, operating procedures, communications plan, as appropriate
Act	Barging season	Provide barging updates to stakeholder via informal meetings and website
Monitor	Barging season	Specific issue monitoring (as needed, see Section 6.2)
Evaluate	Barging season	Review issues raised during barging season and revise barge plan, operating procedures, communications plan, as appropriate
Evaluate	Before post-barging meeting	Summary of current year type of issues reported Summary of current year number of issues reported, issues resolved, and revisions made, if any.
Act	Post-barging season	Announce and conduct post-barging meeting
Monitor	Post-barging meeting	Gather stakeholder feedback at post-barging meeting Record stakeholder comments
Evaluate	After post-barging meeting	Review annual monitoring data, stakeholder feedback, evaluate the information, and revise barge plan, operating procedures, communications plan, as appropriate
Plan	After post-barging meeting	Update Appendix A - Kuskokwim River and Kuskokwim Bay Important Subsistence Areas, if new information is provided regarding subsistence
Plan	After post-barging meeting	On the basis on new information learned through monitoring or stakeholder feedback, new technological advances, or other relevant developments, evaluate and modify, if necessary, the plan's communication methods and procedures.
Plan	After post-barging meeting	On an annual basis, after the post-barging season meeting, and prior to the next season pre-barging meeting, the Donlin Gold Community Relations Manager will provide a summary presentation to the DATROC of the monitoring results and plan updates (if any) for review and comment.
Act	Year-round	Conflict or concern resolution if any arise

9.0 REFERENCES

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Appendix A – Kuskokwim River and Kuskokwim Bay Important Subsistence Areas

ANIAK
CHUATHBALUK
NAPAIMUTE
CROOKED CREEK
JUNGJUK (ANGYARUAQ) PORT
Owhat River
Aniak River
Doestock Creek
Kuskokwim River
Suter Creek
Kolmakof River
Getmuna Creek
Bell Creek
Crooked Creek
Jungjuk Creek
Sue Creek
Oskawalik River
Holokuk River
Veahna Creek
Victoria Creek
Kogoyuk Creek
Ski Creek
Swift Creek
Buckstock River
Arolik River
N

- Fishing Activity (2009)
- Fishing Activity (2013)
- Donlin-Jungjuk Road
- Barge Route

Map Location

FISHING ACTIVITY

DONLIN GOLD PROJECT

SCALE: 0 1 2 4 mi / 0 1.5 3 6 km

PAGE: Page 1 of 6

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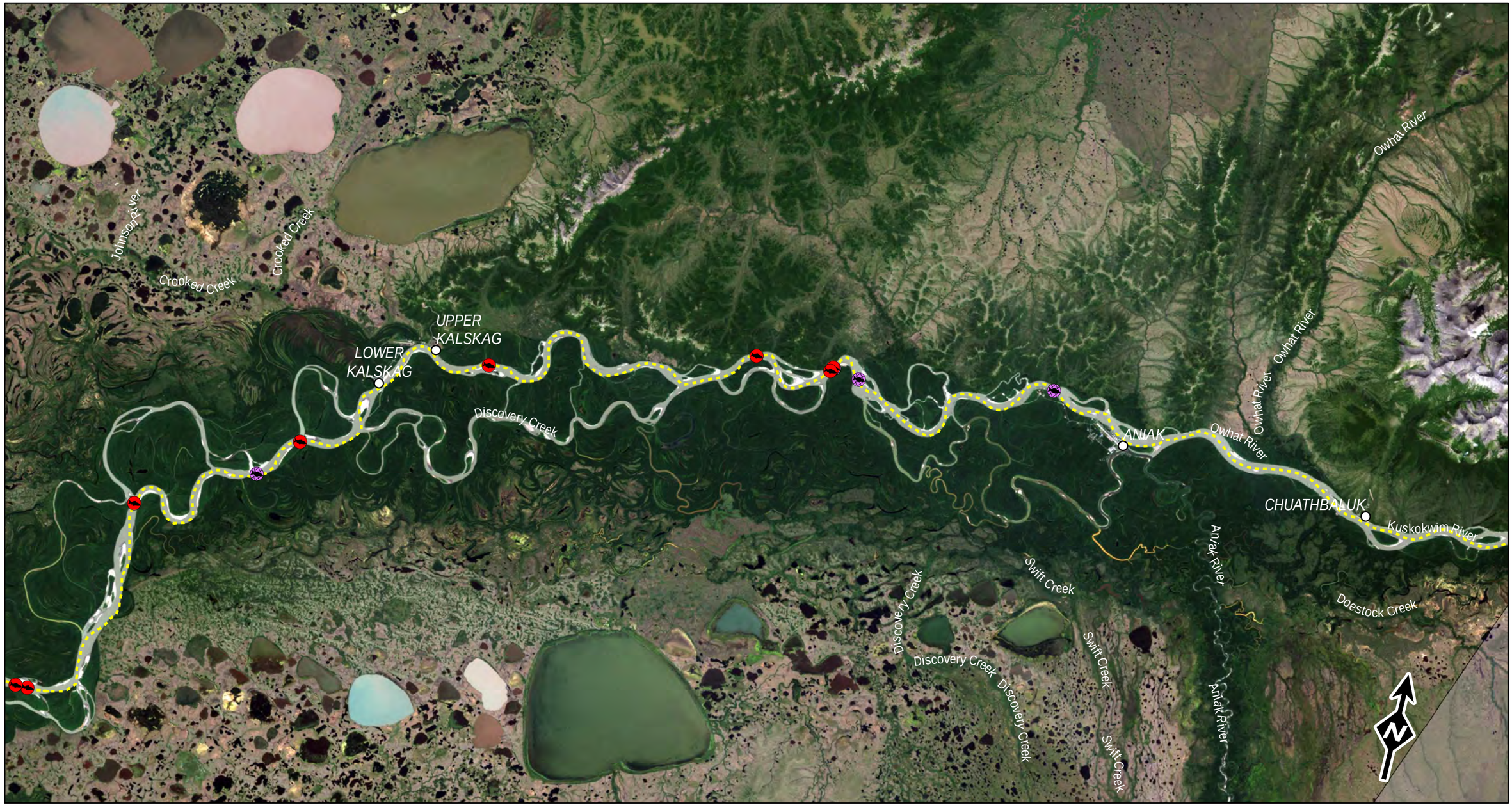
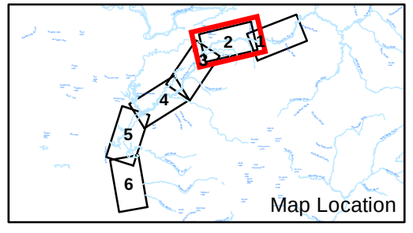


Fishing Activity (2009)
Fishing Activity (2013)
Donlin-Jungjuk Road
Barge Route



DONLIN GOLD

FISHING ACTIVITY

DONLIN GOLD PROJECT

SCALE:
0 1 2 4 mi
0 1.5 3 6 km

PAGE:
Page 2 of 6

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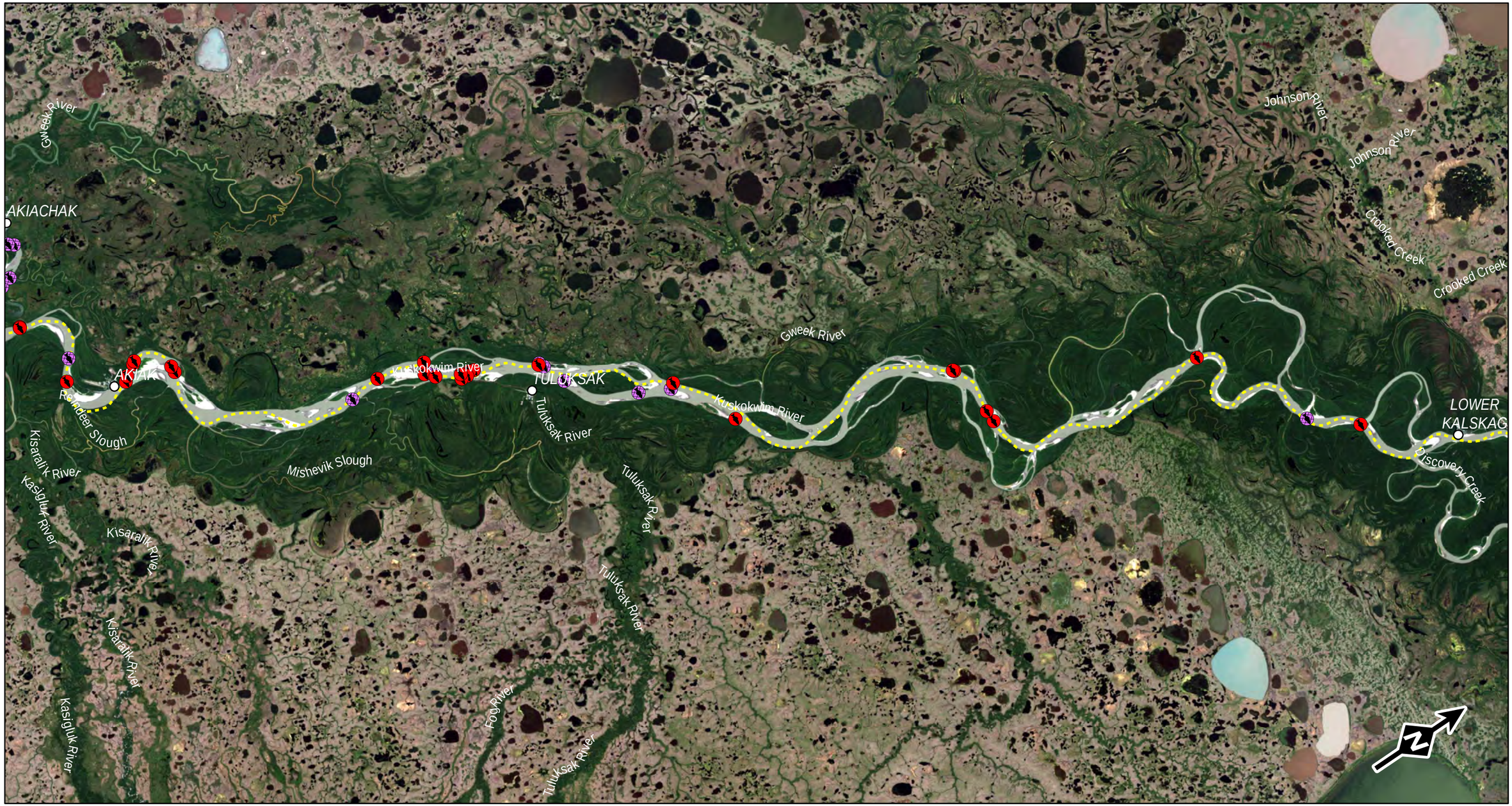
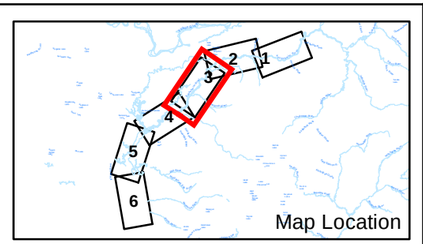


Fishing Activity (2009)
Fishing Activity (2013)
Donlin-Jungjuk Road
Barge Route



DONLIN GOLD

FISHING ACTIVITY

DONLIN GOLD PROJECT

SCALE:
0 1 2 4 mi
0 1.5 3 6 km

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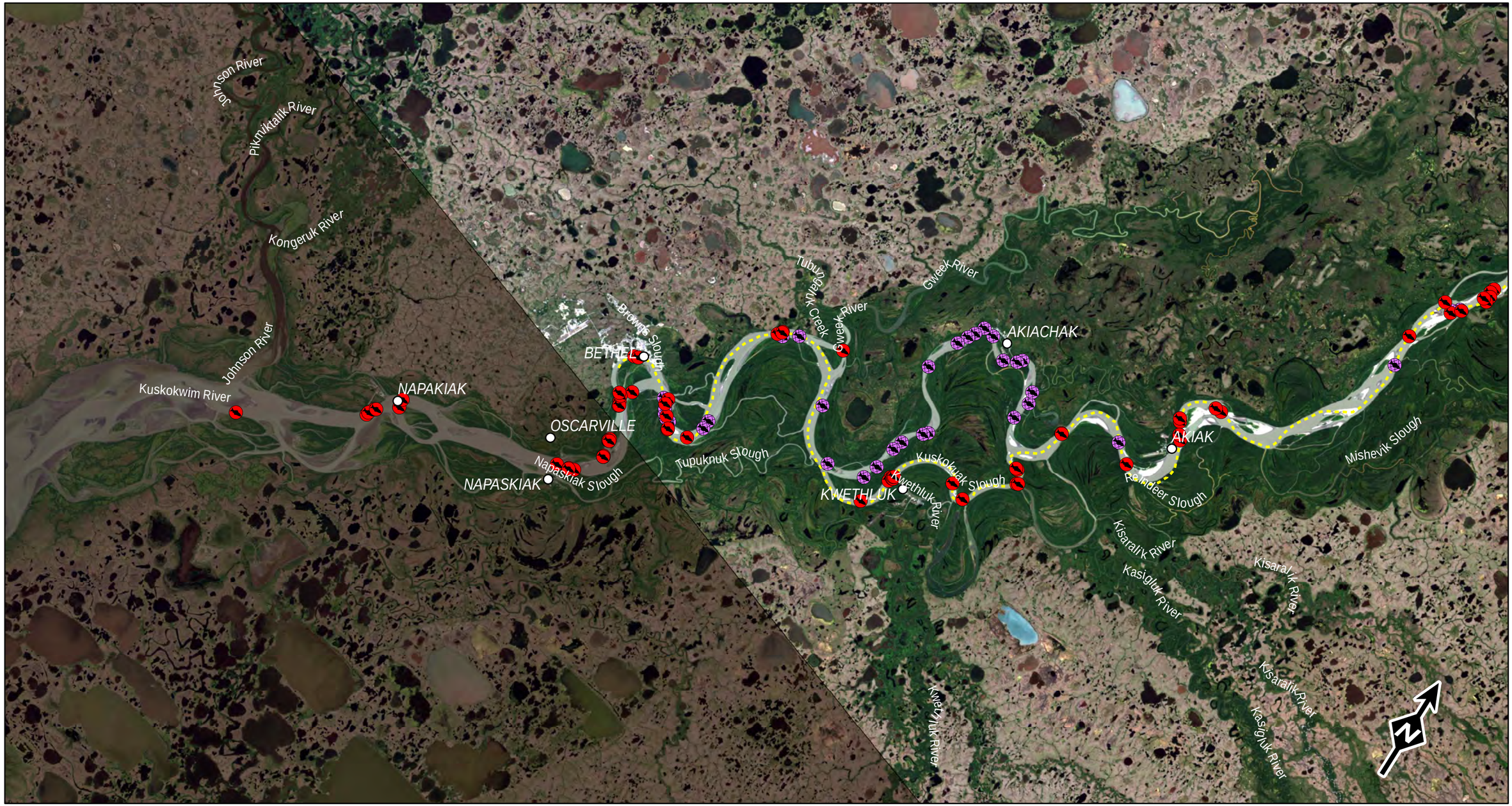
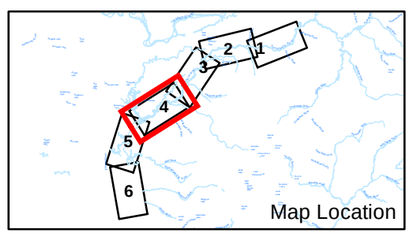


Fishing Activity (2009)
Fishing Activity (2013)
Donlin-Jungjuk Road
Barge Route



DONLIN GOLD

FISHING ACTIVITY

DONLIN GOLD PROJECT

SCALE:
0 1 2 4 mi
0 1.5 3 6 km

PAGE:
Page 4 of 6

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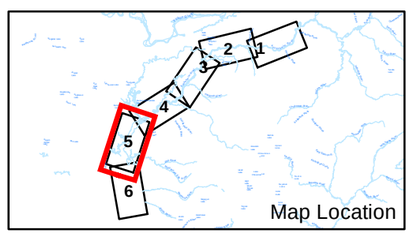
Fishing Activity (2009)
Fishing Activity (2013)
Donlin-Jungjuk Road
Barge Route



DONLIN GOLD

FISHING ACTIVITY

DONLIN GOLD PROJECT

SCALE:
0 1 2 4 mi
0 1.5 3 6 km

PAGE:
Page 5 of 6

DG: ENV0343.mxd, 02/27/17, R01

Fishing Activity (2009)
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Donlin-Jungjuk Road
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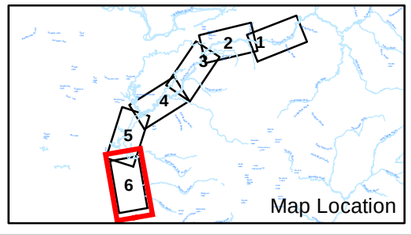

DONLIN GOLD

FISHING ACTIVITY

DONLIN GOLD PROJECT

SCALE:
0 1 2 4 mi
0 1.5 3 6 km

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Page 6 of 6

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Appendix B – USCG Navigation Rules and Regulations Handbook, Rule 9

*Appendix **B*** **–USCG Navigation Rules and Regulations Handbook - Rule 9 (August 2014)**

(a) (i) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.

(ii) Notwithstanding Rule 9(a)(i) and Rule 14(a), a power-driven vessel operating in narrow channel or fairway on the Great Lakes, Western Rivers, or waters specified by the Secretary, and proceeding downbound with a following current shall have the right-of-way over an upbound vessel, shall propose the manner and place of passage, and shall initiate the maneuvering signals prescribed by Rule 34(a)(i), as appropriate. The vessel proceeding upbound against the current shall hold as necessary to permit safe passing.

(b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel [which | that] can safely navigate only within a narrow channel or fairway.

(c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.

(d) A vessel [shall | must] not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within that channel or fairway. The latter vessel [may | must] use the signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.

(e) (i) In a narrow channel or fairway when overtaking [can take place only if the vessel to be overtaken has to take action to permit safe passing, the vessel intending to overtake | the, power-driven vessel intending to overtake another power-driven vessel] shall indicate her intention by sounding the appropriate signal prescribed in [Rule 34(c)(i) | Rule 34(c)] [and take steps to permit safe passing]. The [power-driven] vessel [to be | being] overtaken, if in agreement, [shall] sound the [appropriate | same] signal [prescribed in Rule 34(c)(ii)] and [may, if specifically agreed to,] take steps to permit safe passing. If in doubt she [may | shall] sound the signals prescribed in Rule 34(d).

(ii) This rule does not relieve the overtaking vessel of her obligation under Rule 13.

(f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).

(g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.