APPENDIX U

Donlin Gold Invasive Species Prevention and Management Plan

- Natural Gas Pipeline Invasive Species Prevention and Management Plan, SRK Consulting, March 2018.

Natural Gas Pipeline
INVASIVE SPECIES PREVENTION and MANAGEMENT PLAN

Donlin Gold Project

March 2018

Revised Draft

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ACRONYMS

ACT	Abatement and Control Treatment Plan
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish & Game
ADNR	Alaska Department of Natural Resources
APMC	Alaska Plant Materials Center
BLM	Bureau Land Management
BMP	Best Management Practice
BPL	Beluga Gas Pipeline
Calista	Calista Native Corporation
CIRI	Cook Inlet Region, Incorporated
EDRR	Early Detection and Rapid Response
HACCP	Hazard Analysis and Critical Control Point
IS	Invasive Species
ISPMP	Invasive Species Prevention and Management Plan
IWM	Integrated Weed Management
MP	milepost
PAR	Pesticide Application Record
PPE	Personal Protection Equipment
PUP	Pesticide Use Proposal
ROW	right-of-way
SRR	Stabilization, Rehabilitation and Reclamation
SRRP	Stabilization, Rehabilitation and Reclamation Plan
USEPA	U.S. Environmental Protection Agency

UNITS OF MEASURE

F°	Fahrenheit
ft	foot/feet
km	kilometers
m	meter
mm	millimeters

1.0 INTRODUCTION

Donlin Gold LLC (Donlin Gold) recognizes its responsibility includes addressing invasive species prevention, mitigation, and control during planning, construction, operation, maintenance, and termination of the Donlin Gold Natural Gas Pipeline project. It further understands that prevention of invasive species (IS) would be the primary responsibility of Donlin Gold and its contractors and that prevention would be the most effective approach in invasive species management for this remote gas pipeline project. All temporary construction areas and the permanent right-of-way (ROW), including construction camps, access roads and routes, material source sites, airstrips, water use and extraction sites, pipeline equipment and pipe storage yards and ancillary facility sites, and any other pipeline areas disturbed during the life of the proposed project are collectively referred to as the project area.

Donlin Gold would initiate efforts to eliminate or minimize the potential opportunity for introducing IS to the project area. This includes design and planning efforts to minimize and prevent the introduction of IS, Early Detection and Rapid Response (EDRR), use of Best Management Practices (BMPs) and completing a Hazard Analysis and Critical Control Point (HACCP) plan for critical control points for the proposed project (Appendix H). Where existing IS are found within the proposed project area Donlin Gold would coordinate implementation of this plan with the applicable landowner/agency how best to address them with the intent being to identify locations and treat existing IS prior to construction when and where appropriate. Donlin Gold would comply with state and federal regulatory and procedural requirements while implementing IS prevention, mitigation, and control actions for terrestrial and aquatic freshwater species during construction, operation, maintenance, and termination of the Donlin Gold Natural Gas Pipeline project.

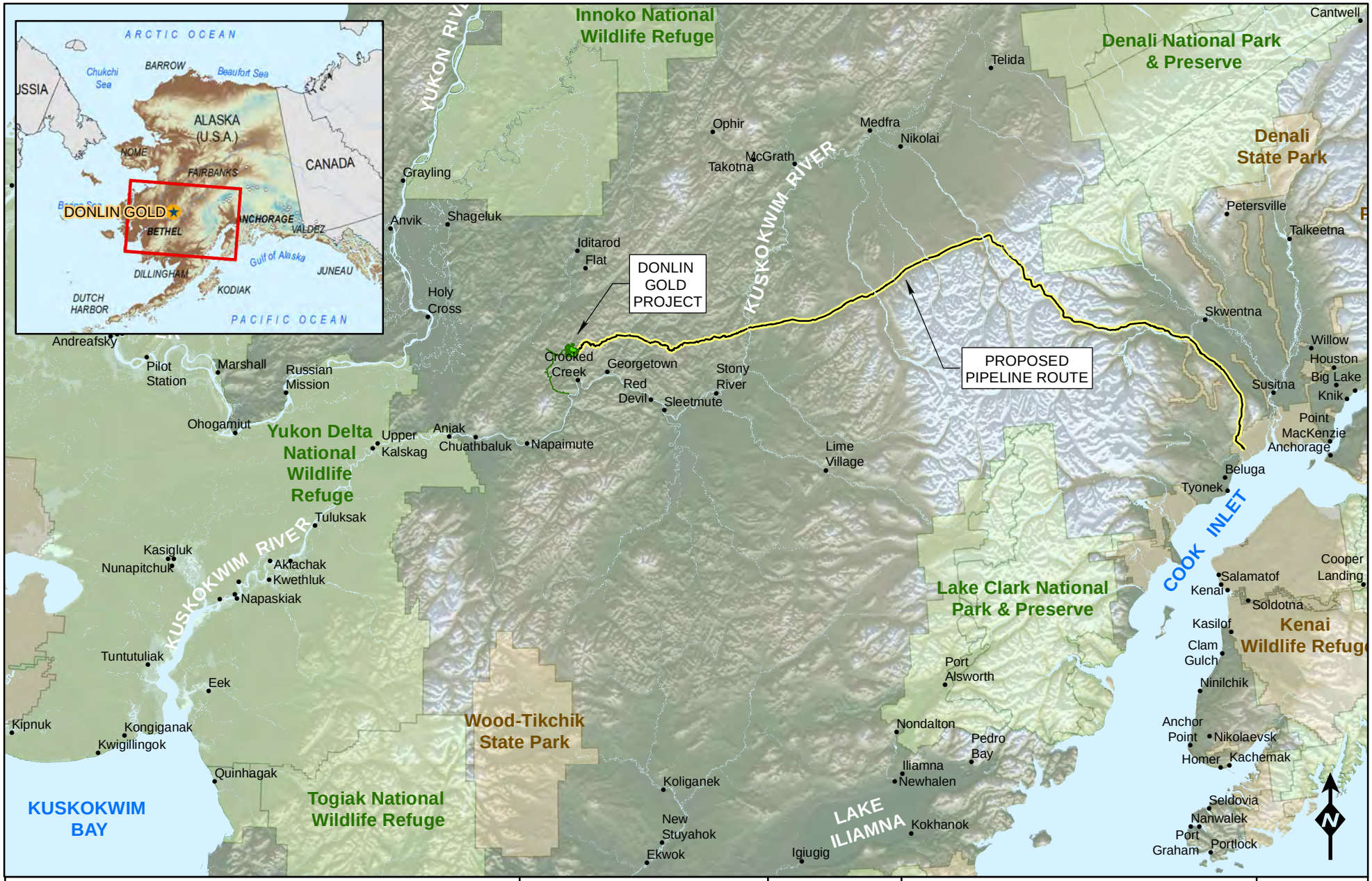
1.1 Project Description

The Invasive Species Prevention and Management Plan (ISPMP or Plan) only addresses the proposed natural gas pipeline project area of the proposed Donlin Gold project and does not apply to the mine site or marine activities carried out in support of the pipeline project.

Marine activities in the Kuskokwim River involves tugs and barges that are dedicated to that service area and thus are not a pathway for introduction of invasive species to the system (i.e. they do not travel between river systems). Marine barges only travel as far as Bethel, where cargo would be trans-loaded to the dedicated river barge fleet. This provides a natural break in the pathway between marine waters and the river system. In addition, growth and spread of invasive species via tugs and barges occurs on vessels that are parked and out of service for extended periods of time (i.e. several months or more). For the river barges, they will be utilized throughout the summer season, then removed from the waterway for the winter and stored in upland areas. The freezing weather during the winter will further deter any growth and propagation on the hulls of these vessels of invasive species. The conclusion drawn is the river barge system, as designed and operated as described above, does not pose a threat or opportunity for the spread of invasive species in the river system. Barge operators will be tasked to pay attention to any vegetation or other biologic build-up on the hulls at the end and beginning of each barge season.

The proposed 14-inch (356 mm) natural gas pipeline approximately 315 miles long (507 km) would originate at the west end of the Beluga Gas Field, approximately 30 miles (48 km)

northwest of Anchorage at a tie-in near Beluga within the Susitna Flats State Game Refuge located in the Matanuska-Susitna Borough and would run to the proposed Donlin Gold mine located in Southwest Alaska as shown in Figure 1-1. The pipeline route initiates at the Beluga Gas Pipeline (BPL) (natural gas source) which would be designated milepost zero (MP 0). The pipeline would receive booster compression supplied by one compressor station located near the BPL tie-in at approximately MP 0.4. The route then proceeds north, traversing the east flank of Little Mount Susitna to the Skwentna River (approximately MP 50), and then parallels the Skwentna River westerly to Puntilla Lake (approximately MP 102). The route crosses the Alaska Range following primarily the Jones River Valley. The pipeline route then continues southwest to the Farewell area (approximately MP 157), paralleling the Alaska Range until crossing the Kuskokwim River (approximately MP 240). Beyond the Kuskokwim River, the route primarily follows ridgelines for more than 80 miles (129 km) toward the west, to the proposed Donlin Gold mine site that is the pipeline terminus at approximately MP 315, about 10 miles (16 km) north of the Village of Crooked Creek.



- Populated Place
- Proposed Natural Gas Pipeline Alignment
- Proposed Infrastructure Layout
- Federal Administrative Boundaries
- State Administrative Boundaries

Seward Meridian, UTM Zone 5, NAD83

SCALE:

0 12.5 25 50 mi

0 20 40 80 km

PROJECT LOCATION MAP

DONLIN GOLD PROJECT

FIGURE:

1-1

DG: PER540.mxd, 10/05/16, R01

1.2 Plan Purpose

The purpose of this Plan is to describe the measures to be utilized to prevent, mitigate and control the introduction and spread of invasive species (IS) during the planning, construction, operation, maintenance, and termination of the proposed gas pipeline project. Donlin Gold and its contractors would be responsible for carrying out the prevention, mitigation and control requirements of this Plan and any other applicable regulatory or landowner requirements unless other arrangements are made to facilitate detection and treatment as described in Section 3.3.

The management actions to be taken and the treatment methods to be used to prevent, mitigate and control the introduction and spread of IS have been developed in coordination with the State of Alaska, Department of Natural Resources (ADNR) Plant Materials Center, Alaska Department of Fish & Game (ADF&G) Invasive Species Program, and Bureau of Land Management (BLM) Anchorage Field Office. Cooperation and coordination with appropriate agencies and landowners would continue as necessary throughout the life of the pipeline project to ensure the proper implementation of this Plan in achieving its intended purpose including adaptation to potential climate change.

Over the life of the proposed pipeline project Donlin Gold would continue to assess and evaluate the implementation and effectiveness of the management actions and methods taken in conjunction with this Plan and recommend for agency approval adjustments where considered necessary and appropriate in its efforts to prevent, mitigate and control the spread of IS.

1.3 Objectives

The objectives of this Plan are to:

- Protect the health and safety of personnel involved with implementing the Plan.
- Identify areas supporting IS prior to construction in cooperation with agencies, and specifically any areas of IS Special Concern.
- Prevent the spread of existing IS.
- Prevent the introduction and spread of new IS.
- Detect IS early and initiate rapid responses to prevent establishment and spread.
- Treat to eradicate small populations and control or eradicate large populations of IS.
- Monitor the project area for IS to assess prevention, mitigation and control measures and to determine management action success following completion of construction, and during operation, maintenance and termination activities.
- Rehabilitate and reclaim as appropriate areas where IS have been treated.
- Communicate and coordinate with agencies and organizations to determine best available science for invasive species prevention, mitigation and control.
- Comply with any applicable state and federal agency land use plans, IS identification /tracking programs, the established monitoring and reporting requirements of the Plan, and applicable regulatory and permit requirements.

- Educate Donlin Gold and contractor personnel in the importance of properly implementing prevention, mitigation and control actions and methods contained in the Plan necessary to address IS.
- Ensure compliance with the Plan. Coordinate with appropriate state and federal agencies, Calista, and CIRI to identify IS and determine how best to mitigate IS that may result from public use of the pipeline project area during the life of the project.

1.4 Definitions

Abatement and Control Treatment Plan (ACT): An action plan prepared to identify the control treatment measures and monitoring requirements to be implemented for IS in a given location (Appendix F).

Best Management Practices (BMPs): Those control or management actions or techniques usually considered the best or most appropriate to use depending on the circumstances.

Certified: As determined by ADNR, 'certified,' as applied to bulblets, tuber, or horticultural plants or to agricultural, vegetable, tree, shrub, flower, or cereal grain seed, means inspected and labeled by and in accordance with the standards and rules and regulations of the official certification agency or in accordance with similar standards established by a similar authority in another state, country, or territory. Can be applied to 'certified' weed-free seed or 'certified' weed free straw/mulch. Always applies to the certification for the absence of noxious weed (seed or reproductive parts) and can be applied to other species ("certified foxtail barley-free") as requested.

Control: Eradicating, suppressing, reducing or managing invasive species populations, and preventing spread.

Early Detection/Rapid Response (EDRR): Monitoring project areas to search for and detect absence or presence of non-native species. If and when IS are detected, timely reporting and response is implemented to facilitate control or eradication.

Eradication: The elimination of IS within a specific area.

Establishment: In general an infestation of an annual weed is "established" when its seeds produce new plants (approximately one year) and a perennial weed "establishes" when the roots are securely developed (up to three years).

Infestation: A population of an undesirable species.

Integrated Pest Management (IPM): The consideration, evaluation, and use of alternatives available in resource management to prevent, eradicate, or mitigate IS and their impact.

Integrated Weed Management (IWM): The use of various techniques as one system to gain control of a weed species. Techniques may include manual, mechanical, biological and chemical methods, to prevent or control IS.

Invasive Species: Any organism that is not native to the area under consideration and, upon intentional or accidental introduction, has the potential to spread aggressively and can produce significant changes to vegetation, community composition, structure or ecosystem function resulting in or potentially resulting in harm to the environment, economies, and/or human health.

- **Area of Invasive Species Special Concern (IS-SC)**: An area that already may have significantly established IS or where newly located and identified IS presents the risk of significantly establishing itself in the pipeline project area.
- **IS-Special Concern Location (IS-SCL)**: The location of an area of significant IS infestation requiring active treatment and monitoring.

Invasive Weeds: A non-native plant species, whose introduction does or is likely to cause economic or environmental harm or harm to human health. These species may or may not have been designated as a "noxious weed" by the state.

Mitigate: To reduce the potential for IS establishment or continued existence in the project area.

New Invader: An invasive species that has recently moved into a particular area.

Noxious Weeds: In Alaska noxious weeds are defined in 11AAC34.400 as: any species of plant either annual, biennial or perennial reproduced by seed, root, underground stem or bulblet, which when established is or may become destructive and difficult to control by ordinary means of cultivation or other farm practices: or seed of such weeds that is considered commercially inseparable from agricultural or vegetable seed.

Prevention: Preventative measures focused on keeping the project area free of IS that are not yet established in the project area. This includes preventing the spread of any life stage of an IS or propagative parts into or within the project area during construction, operation, maintenance or termination activities.

Prohibited: An invasive plant that has recently moved into a particular area. May also apply to Prohibited Noxious Weeds (list of species that are illegal to sell or distribute).

Restricted (species): State designated weed species occurring on a separate list that lists maximum allowable tolerances for those designated species in an effort at limiting the spread of objectionable species; typically into seed mixes. ADNR's definition, "Restricted noxious weed seed" means the seed of weeds which are very objectionable in fields, lawns, and gardens of this state, but which can be controlled by good cultural practices. Restricted noxious weeds are also defined by 11AAC 34.020. These species are allowed to be contaminants in seed lots. The amount of seed of the restricted species seed allowed in a commercial seed lot varies with species of the restricted weed species. By these regulations the state is attempting to increase quality of commercial seed grown in Alaska and reduce the spread of objectionable species.

Suppression: A reduction in the density, frequency or spread of IS.

Weed: An undesirable plant. "A plant out of place", depending on management objectives.

2.0 INVASIVE SPECIES ASSESSMENT

2.1 Existing IS Inventory

In addition to its own efforts, Donlin Gold would continue to coordinate with landowners, appropriate state and federal agencies, and others to determine the location and extent of any known IS or IS infestations in the project area.

The existence of IS has been documented along the proposed pipeline corridor through incidental observations. The occurrence of IS in areas of the Iditarod Trail is documented. The Alaska Natural Heritage Program (AKNHP), University of Alaska-Anchorage (now the Alaska Center for Conservation Science (ACCS)) completed non-native plant surveys on BLM lands along the Iditarod National Historic Trail during the 2009 field season. The locations and abundance of all non-native and dominant native vascular plants were recorded at high-use and BLM-managed sections of the trail. The results indicated that the occurrence of non-native species is largely restricted to disturbed or developed areas. Cabins and remote airstrips support the greatest abundance and diversity of non-native plant species whereas the trail itself is predominately weed-free. Non-native species have established along the trail system presumably via historical use (e.g. travel along the trail between villages, mining towns, roadhouses, etc.) and, more recently, as contaminants associated with aircraft, machinery, goods, and the bedding straw used by mushers.[1] Other locations within the project area not associated with such previous disturbances or development have had little or no exposure to IS.

Incidental observations of non-native plant species were identified by contract wetland field crews during performance of wetland delineation work for the proposed Donlin Gold project. Four non-native species documented in the survey area, the common dandelion had the highest Invasiveness Rank of 58. No other species documented during the wetland field work had an Invasiveness Rank greater than 46 (weakly invasive). Species that have scored less than 50 using the Invasiveness Ranking System[2] generally are not known to substantially alter natural ecosystems and are often considered of lower management significance. All were found at a location (Squaw Creek) over 3 miles from the pipeline right-of way (ROW), outside the construction area.

2.2 Identification

The Plan as a proactive management measure emphasizes preventing the introduction and spread of IS during planning, construction, operation, maintenance, and termination of the gas pipeline project by implementing proper precautionary procedures in dealing with personnel and gear, materials, supplies and equipment in preparation for movement to the project area; when arriving at the entry points to the project area; while within the project area; and, during demobilization activities (Section 3.1). Prior to construction, Donlin Gold would train or require training of its contractor personnel on the Donlin Gold's ISPMP including the identification and potential effects of IS.

[1] Tracking weeds along the Iditarod National Historic Trail, Final Report prepared by Lindsey Flagstad and Helen Cortes-Burns, The Alaska Natural Heritage Program, University of Alaska, Anchorage

[2] Invasive Ranking System – system used by AKNHP for ranking invasiveness of various species in Alaska.

In ROW locations where IS are detected or known to exist, the focus would be on early detection, rapid response, and active management of those IS that require such management measures.

In ROW locations where significant IS are identified and determined to be an area of IS-SC within the project area prior to or following construction, the following steps would be taken by the environmental inspector or appropriately designated personnel:

- The IS-SC would be identified and photographically documented. Photo images would be captured to describe the species, and to show the broader infestation/distribution.
- The IS-SCL would be recorded via global positioning system (GPS) coordinates and other milepost or landmark feature. The location would be noted on right-of-way (ROW) alignment sheets or other appropriate maps or in a data base for construction and/or post construction purposes. The Non-Native IS Survey and Inventory Sheet (IS Identification Report Form) (Appendix E) would be completed and kept on file for reference during construction and/or post-construction monitoring. A copy would be made available to construction/field staff working within the infestation area. The information will also be entered into a spreadsheet and/or GIS database for overall project management and data presentation.
- Appropriate reporting, notifications and agency coordination would be initiated, including notification to ADNR, Division of Agriculture, Invasive Plant Coordinator, and/or ADF&G, Invasive Species Program, AKNHP, and BLM as appropriate. Alaska BLM Invasive Species Policy requires agency contact within 30 days. Reports would be entered into AKEPIC and NISIMS.
- The areas of IS-SC supporting known infestations would be delineated in the field on the construction ROW as IS-SCLs prior to construction and treated.
- Management goals would be identified including any prevention and control treatment measures.
- The IS-SC would be treated prior to and/or during construction and the IS-SCL monitored during post-construction for need of any additional IS control treatment.

Where isolated or insignificant IS are located prior to construction, the IS would be identified and documented using a Non-Native IS Survey and Inventory Sheet (IS Identification Report Form) as provided in Appendix E. This would be done for management and control treatment measures prior to construction and for reference in general monitoring or for treatment as determined appropriate to prevent spread during and following construction.

The IS that have been documented near or adjacent to the project area in the Alaska Exotic Plant Information Clearing House (AKEPIC 2012) have been identified and prioritized according to management goals. These management goals are based on the species known abundance or distribution near the project area, the invasive potential of the species (Nawrocki et al, 2011) and the efficacy of management strategies. The IS have been grouped into four management categories applicable to the pipeline project area:

- **EDRR**: IS not known to exist within the project area but are known high priority species in other parts of the state.
- **Eradicate:** IS that are highly ranked and therefore pose a higher threat for invasiveness. IS found in the project area would be managed to eliminate any occurrences in the project area.

- **Suppress:** IS found in the project area would be managed to limit the spread of the IS through limiting the reproductive potential of the plant or eradicating an isolated population.
- **Monitor:** IS found in the project area would be documented and monitored. These IS are typically widespread and do not warrant large-scale management efforts. Suppression activities may be explored if IS are found to be growing aggressively or in a sensitive area.

Table 2-1 provides a list of observed and potentially occurring IS in the project area.

Table 2-1: Management of Observed and Potentially Occurring IS

EDRR			
The following IS not known to exist within or adjacent to the project area are known high priority species in other parts of the state and would require Early Detection Rapid Response. These types of IS would be subject to EDRR.			
Common Name	**Scientific Name**	**Invasiveness Ranking**	**Goal**
Spotted knapweed	*Centaurea stoebe*	86	**EDRR**
Bird vetch	*Vicia cracca*	73	**EDRR**
Purple loosestrife	*Lythrum salicaria*	84	**EDRR**
Perennial sowthistle	*Sonchus arvensis*	73	**EDRR**
Waterweed	*Elodea spp.*	79	**EDRR**
ERADICATE			
The following IS are highly ranked and therefore pose a higher threat for invasiveness. These IS, if found in the project area, would be managed to eliminate any occurrences in the project area. These types of IS would be eradicated.			
Yellow toadflax	*Linaria vulgaris*	69	Eradicate
White sweet clover	*Melilotus alba*	81	Eradicate
Canada thistle	*Cirsium arvense*	76	Eradicate
Oxeye daisy	*Leucanthemum vulgare*	61	Eradicate
Reed canarygrass	*Phalaris arundinacea*	83	Suppress
Orange hawkweed	*Hieracium aurantiacum*	79	Eradicate
SUPPRESS			
The following IS, if found in the project area, would be managed to limit the spread of the IS through limiting the reproductive potential of the plant or eradicating an isolated population. These types of IS would be suppressed.			
Splitlip hemptnettle	*Galeopsis bifida*	50	Suppress
Brittlestem hempnettle	*Galeopsis tetrahit*	50	Suppress
Quackgrass	*Elymus repens*	59	Suppress
Smooth brome	*Bromus inermis*	62	Suppress
Foxtail barley	*Hordeum jubatum*	63	Suppress
Narrowleaf hawksbeard	*Crepis tectorum*	56	Suppress
Common dandelion (in areas where not currently present or rare)	*Taraxacum officinale*	58	Supress
MONITOR			
The following IS if found in the project area would be documented and monitored. These IS are typically widespread and do not warrant large-scale management efforts. Suppression activities may be explored if IS are found to be growing aggressively or in a sensitive area. These types of IS would be monitored.			
Pineapple-weed	*Matricaria matricarioides*	32	Monitor
Common plantain	*Plantago major*	44	Monitor
Annual bluegrass	*Poa annua*	46	Monitor
Common dandelion	*Taraxacum officinale*	58	Monitor

It is important to note that this list is not comprehensive, but is a list of priority species most likely to occur in the project area based on the information available and those IS that have been observed.

Included in Appendix A is the list of the Prohibited and Restricted Noxious Weeds for the State of Alaska (11 AAC 34.020). As well as those IS identified in Table 2-1.

3.0 MANAGEMENT

Donlin Gold would implement prevention, mitigation, and control measures during construction, operation, maintenance and termination in accordance with regulatory and permit requirements and this Plan once approved. Donlin Gold's primary emphasis would be on preventing the introduction and spread of new IS as the pipeline project area is remote with limited historical exposure to IS. However, if IS are present in the project area, Donlin Gold would identify them, document the location and determine appropriate management measures. When applicable control treatment measures would be used before construction activities advance to assist in preventing IS spread as a result of the work/activity, as well as any additional preventive measures during the period of actual work activity and subsequent operation, maintenance and termination. Specific management efforts and control treatment measures would be considered and developed based on site conditions, IS biological characteristics, and prioritization of the IS under the ISPMP or through coordination with applicable agencies, land managers, and available scientific information as necessary. Donlin Gold would employ the following measures and best management practices[3] during planning, construction, operation, maintenance and termination:

1. Clean vehicles and equipment regularly, all vehicles and equipment entering or leaving the project area would be clean of all visible vegetation and soils. If vehicles or equipment arrive onsite with vegetation and soils, the vehicles or equipment would be immediately directed to the nearest cleaning station and not permitted within the project area until cleaned and inspected.
2. Equipment and vehicles that come into contact with vegetation or disturbed soil in an area where IS have been identified would be cleaned before being allowed to leave the immediate area.
3. Revegetate with native, local and/or noninvasive plant species in order to reduce erosion and potential IS establishment.
4. Control excavated soils in IS locations, all soil excavated from the ROW or trench where the pipeline traverses an area of IS infestation would be stockpiled within the immediate vicinity and would not be transported to another area along the pipeline.
5. Loose plant and soil material that is removed from vehicles, equipment, and materials or generated from the cleaning operations would be rendered incapable of any growth or reproduction by incineration or deep burial.
6. Avoid infested areas or control invasive to prevent additional seed development or spread, and wash vehicles and equipment. All areas with invasive species infestations would be clearly marked in the field to alert construction personnel of special construction conditions in the area, even if treatment has occurred prior to construction. The environmental inspector may also direct that portions of the temporary construction ROW be isolated from vehicles and equipment to prevent contact of invasive species plant material with vehicles or equipment if determined necessary.

[3] Best Management Practices, Controlling The Spread of Invasive Plants During Road Maintenance by G. Graziano, S. Seefeldt and L. Clayton, Cooperative Extension Service, University of Alaska PMC-00342, 2014.

7. Work from uninfested to infested areas if possible especially when doing maintenance work.
8. Coordinate with agencies or other groups involved in managing IS.
9. All woody or timber material not used for project purposes or removed from the project area would be disposed of in an approved manner within 3 months.
10. Schedule vegetation maintenance activities to prevent seed production of IS.
11. Use certified weed-free materials if available. On lands managed by BLM non-weed-free materials would require prior approval by Administrative Officer before use.
12. Identify locations of known IS infestations prior to construction and implement the control measure that would be the best method available for the time, location, and species.
13. Record and report locations of IS through the AKEPIC and National Invasive Species Information Management System (NISIMS).
14. Scout for IS prior to performing maintenance activities.

It would be difficult to avoid spreading an IS if work is done first and the control treatment response is done later.

Within the project area following initial Stabilization, Rehabilitation and Reclamation (SRR), IS control treatment measures would be implemented in accordance with goals of this plan and applicable agency authority and permitting requirements. Once IS are identified and reported, an EDRR plan of action would be put in place and control treatment measures would begin. The EDRR process would also identify the potential introduction points for the IS.

3.1 Prevention

Donlin Gold and contractor personnel would receive orientation and IS training before going to the project area. The training would include basic information of the ISPMP, general identification for IS, BMPs for preventing the introduction or spread of IS during project activities, information regarding the location and management goals for any known IS-SC including any prevention and control measures to be used in the project area. Those specifically responsible for dealing with the prevention and control measures to be taken would receive more thorough training or would have demonstrated qualifications and required certifications and licensing to apply herbicides to manage IS. Also, as approximately 68% of construction activities would take place during the winter months precautions would be necessary to prevent IS spread in any areas where known IS were located. The project area would be evaluated for IS during the growing season prior to winter construction. Any identified IS stands would then be controlled or delineated in such a manner to be visible/locatable during construction.

Generally, the spread of IS from one location to another has been linked to the use and movement of contaminated vehicles and equipment. Inspection and cleaning of vehicles and equipment is the primary tool for preventing the introduction of IS into an un-infested location. All vehicles and equipment to be used in construction, operation, maintenance and termination actions would be thoroughly inspected and cleaned following procedures and standards prior to shipment to the project area and at relevant checkpoints prior to entering,

during actual use in a known IS site and prior to leaving the project area as outlined in Appendix G.

The guide for best management practices for inspection, decontamination and cleaning of equipment and gear to prevent the spread of aquatic IS, the ***Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species. U.S. Department of the Interior, Bureau of Reclamation, Technical Memorandum No. 86-68220-07-05, 2010 Edition.***

Equipment would be cleaned in any areas where they could possibly pick up IS propagules before moving on to another location free of IS. Inspection and cleaning activities would remove any material that could potentially contain IS seeds or propagules or any life stage of an invasive organism through the use of high pressure washing or compressed air, unless any equipment has been used in areas of established aquatic IS, including but not limited to elodea, zebra or quagga mussels, in which case high pressure, hot water (212°F) washing would occur.

In addition to vehicles and equipment, all gear, tool bags, footwear, and personal equipment must also be free of all plant debris, mud, sediment, or other signs of potential IS prior to arrival at the project site as outlined in Appendix G.

During trench backfilling and when site reclamation is undertaken, which would be implemented as required concurrent with construction, maintenance and termination activities or as soon as conditions allow afterwards, the stockpiled soil from the area would be used. This stockpiled soil material would be removed and set aside upon initial site disturbance. Any new plant seeds used in revegetation must be native plant seed and certified weed-free as per Alaska seed regulatory requirements.

Identified IS-SC would be delineated prior to initiating construction as outlined in Section 2.2. In these areas, any onsite material cleared for construction would be stockpiled and contained directly adjacent to the area from which it originated. This material would not be utilized or moved to another area within the project site to eliminate the spread of the IS to a new, non-infested area. Any equipment or vehicles used within the IS-SC area would be inspected and cleaned as outlined in Appendix G prior to moving out of the immediate area.

If commercial mulch, hay or straw or other such material is needed for use in the project area and acquired from off-site it must be certified as weed-free in compliance with Alaska standards. Sources for weed free materials would be coordinated with the Alaska Plant Materials Center (APMC) or BLM. Acknowledging that Certified Weed Free Products can require additional time to source, any needed weed-free products would be identified well in advance and would be coordinated with the APMC or BLM and used if available.

3.1.1 Check Points

Properly conducted inspection and cleaning of equipment prior to entry at a new location limits introduction of IS. Personnel would be trained to look for problem areas that are not apparent upon casual observation using a systematic inspection procedure and checklists. Inspections would be performed during daylight hours or if necessary with appropriate lighting for good visibility. Inspections should be carried out on personal gear, equipment, and vehicles at staging areas dedicated to equipment and vehicle cleaning. These check point locations would be established as part of the mobilization, construction, and demobilization plans for equipment and vehicles entering and exiting the project area.

Inspections would also be conducted as part of ongoing construction and later during maintenance and termination activities to prevent spread of IS from one area to another.

Check points include:

- River banks
- Road corridors
- Airstrips
- Material sites
- Pipe stage yards
- Camps
- Off-site Material/supply staging areas
- During construction, operations, maintenance and termination at other locations determined by the environmental inspector
- Compressor station site.

3.1.2 Project Area Vectors

The following is a list of project vectors by which IS may enter or be spread within the project area:

Equipment (including vehicles): Would be cleaned and inspected prior to entering the project area and as necessary during use and when moving to a new construction section or when being demobilized to an off-site location.

Existing Populations: Would be located, identified and treated if determined applicable for the species prior to and during construction.

Freshwater Vessels: Would be cleaned and inspected prior to entering the project area and before use in any fresh water body in the project area.

Aircraft: Would require inspection prior to use in transporting personnel, materials and supplies to the project area, and if available for continued use within the project area be inspected and cleaned as necessary during use at various locations within the project area.

Materials/Supplies: Would be inspected prior to being transported to project area and when entering the project area.

Personnel and Gear: Would require appropriate precautions, inspection and cleaning to ensure the absence of IS on clothing and gear.

Public Use: Applicable following construction and would be addressed with the appropriate landowner to determine necessary preventive or precautionary steps to be taken by public to prevent or minimize introduction of IS.

Natural Processes: Limited or no control until IS is detected.

Compression Station: Would require appropriate precautions when visiting site, including inspection and cleaning to ensure the absence of IS on clothing and gear. Equipment, materials and supplies would be inspected prior to being transported to project area and when entering the project area.

Weed-free Seed, Mulch, Straw, and Other Erosion Control Materials: Certification would be checked and materials would be inspected prior to being transported to project area and when entering the project areas. Areas where used would be monitored.

3.2 Mitigation

IS Mitigation efforts would focus on proactive measures including:

- Training of personnel.
- Monitoring for IS.
- Prevention of accidental IS spread.
- Assuring disturbed soil surface are quickly revegetated to form a barrier to IS establishment.
- Assuring material from cleaning stations is sequestered and prevented from spread back into the project area. If needed, the material would be rendered incapable of any growth or reproduction by incineration or deep buria.l
- Working with landowner to inform public of potential spread of IS through use of the pipeline ROW for access.
- Working with land owner to reduce or eradicate known invasive species infestations to reduce potential for spread or introduction.
- Providing educational material about IS to public traffic that uses the Farewell public airstrip.

3.3 Control

When needed, control treatment measures (Figure 3-1) would focus on eradicating or suppressing existing infestations of IS within the project area to the point that the IS causes no significant economic or ecologic damage. Control treatment measures include: eradicating, suppressing, reducing or managing IS populations, and preventing spread. It can include taking steps to restore native species and habitats to reduce the effects of IS and prevent further invasions.

There are many control treatment measures available to manage IS, including mechanical/physical, cultural, chemical, or biological treatments. For the purposes of this Plan and considering the nature of the project area, an emphasis would be placed on mechanical/physical and chemical treatments when necessary because of the relative remoteness and limited exposure to IS. There are benefits and risks associated with each treatment. Donlin Gold does not intend to use a biological method of treatment at this time.

Table 3-1: Control Treatment Measures

Method	Example	Benefits	Risks
Mechanical or Physical/Manual	Brushing, mowing	Can cover large areas, little input required	May spread IS, may be limited by topography or soil.
	Revegetation	Can establish a desirable plant community that is resistant to invasions	Possible failure due to weather, competition.
	Light blocking Matting/tarps	Can be used to cover small areas to control local patches of IS where herbicides not desirable	Can be damaged by wildlife and dislodged by strong winds; Rhizomatous species can spread laterally until they exceed the edge of the tarps. Intensive revegetation recommended upon removal of tarp.

Method	Example	Benefits	Risks
Chemical	Herbicides	Can be very effective, selective, can cover a large area Revegetation is often not necessary with well executed treatments	May take multiple applications, may not be appropriate for environmentally sensitive areas, and require certification and permitting.
Biological	Use of Insects and Pathogens	Attack or eat the non-native species	Often have few natural enemies and have the potential to become invasive and attack non-target species.

The appropriate control procedures would include identification of the IS and impacted area, the location, timing and method of treatment, and the confirmation and coordination of appropriate authorizations for IS corrective actions with landowner(s) and agency personnel. Donlin Gold or its contractor(s) would be responsible for implementing the IS control procedures, but may consider utilizing contractors, agency reimbursable services agreements or other cooperative agreements to implement the necessary IS procedures.

Donlin Gold would consult with the appropriate agencies and landowner to determine if, how, and by whom the prevention, mitigation and control treatment of IS in the pipeline project area would be addressed if the occurrence of the IS can be attributed to public use of the project area during the life of the project.

3.3.1 Mechanical/Physical

Physical treatments including the use of hand pulling or hand tools (such as clippers and sawing, grubbing, digging or covering with light blocking fabric or plastic matting) may be used in limited situations where there are individual plants or a very small infestation and the physical removal would remove the plant and/or eliminate the threat of further spread. Mechanical treatments include the use of tools such as chainsaws, brush machines or mowers to limit seed set and maturation to prevent the spread of an IS. Mechanical treatments are able to treat infestations over large areas, but are limited by slope inclination and soil or terrain type. The biology of the IS would be considered as mechanical treatments may spread pieces of plant from which it can regenerate, leading to an increase in its population. Also, control of plants with a complex root structure or plants that can re-grow from pieces of root or other plant parts left in the soil would have less of a chance of success with mechanical or physical treatments and would require an alternative treatment.

The mechanical and physical treatment methods are both labor and time demanding particularly in the remote location of this pipeline and would normally require multiple treatments over each growing season for more than one year. When IS are removed using the manual or mechanical treatment methods, the plant material must be properly disposed to prevent potential regrowth. The following disposal methods would be used:

- Bag plants that are manually removed (dug out, pulled) and back haul from project area for appropriate disposal.
- A dedicated IS incinerator would be available for the destruction of plants, seed and IS contaminated soil or appropriate burial.

3.3.2 Chemical

Chemical control treatment relies on the use of herbicides to kill or reduce the vigor of undesirable plants. Only herbicides that are registered and approved for use in Alaska by the appropriate regulatory agency and the land owner would be used following application instructions and specifications. Donlin Gold or its contractors would consult as necessary with the APMC, the Alaska Department of Environmental Conservation (ADEC), BLM or other appropriate agency/land owner/organization for additional information or assistance regarding IS prevention and control issues that may occur during construction, operation, maintenance and termination. Donlin Gold or its contractor(s) would obtain any necessary certifications, permits authorizing herbicide use and comply with all applicable regulatory requirements, and submit any applicable plans and reports.

Application of herbicides would be used for control treatment of IS. Spot/species specific herbicide application would be used to minimize any impacts on the surrounding vegetation and the environment. If an area became heavily infested and a broader application was necessary, the APMC, ADEC, BLM or other appropriate agency/landowner would be consulted and a site/plant specific ACT Plan would be prepared, if necessary, to be approved prior to implementation. Appendix F provides the Abatement and Control Treatment Plan format. On BLM lands a Pesticide Use Proposal (PUP) would be required as well as a Pesticide Application Record (PAR).

Herbicides would not be stored onsite within the pipeline project area during construction, operation, maintenance and termination. However, if it would be necessary to store herbicides within the project area, the storage of herbicides would comply with applicable state (Article 6 of 18 AAC Chapter 90) and federal regulatory requirements for storage.

Herbicide Transport, Handling, and Application

Herbicide transport, handling, and application would only be done in accordance with 18 AAC 90, any required regulatory permits and consistence with applicable regulatory and manufacture's specifications and instructions. Herbicide application would only be carried out by appropriately trained, qualified, and as required certified/licensed personnel. Only herbicides registered for use by ADEC and land owner approved herbicides would be applied following manufacturer's guidelines approved by the USEPS and applicable federal, state and local laws and regulations. Herbicides will be applied at rates recommended for the most effective control of the target invasive species.

Donlin Gold anticipates that small scale spot applications directed to targeted invasive species would be most likely. Due to the remoteness of the pipeline project area and the limited means of access, most personnel would be flown to the required location with the herbicide and necessary equipment by helicopter or in some cases access may be by vehicle. These spot applications would be made with backpack or handheld sprayers. Larger infestation if found and certain species such as hawkweeds (Hieracium spp.) and oxeye daisy may need small scale broadcast spraying to prevent missing seedlings hidden under other vegetation and to control seeds that haven't germinated yet. For some IS infestations a boom sprayer mounted on a UTV or ATV capable of broadcast spraying may be the most appropriate option. Site locations where herbicides are applied would be properly documented for monitoring and reporting purposes. Herbicide application would be reported in NISIMS.

Photographs would be taken of IS prior to treatment and whenever site monitoring is done. This would continue until abatement and control treatment meets the required performance success standard.

The following general guidelines and these procedures would apply in the use of herbicides (Appendix D):

- Personal Protection Equipment (PPE) would be used by personnel. Minimum PPE required by the herbicide label would be used by personnel applying and handling herbicides. Gloves and safety glasses would be worn for all herbicide work even when not required by the product label. Rubber boots are recommended for applicators.
- First aid equipment and decontamination equipment would be available on site.
- Safety precautions and procedures would be followed.
- IS abatement and control treatment efforts would be scheduled to take place before seed maturation.
- Because of the remoteness of the project area and that personnel and equipment would most likely be flown in by helicopter, only the quantity of herbicide and equipment necessary to treat the anticipated IS/sites would be transported.
- Herbicides would only be transported in approved containers. These are typically lockable and capable of containing 110% of the chemical being transported.
- Herbicide safety information/data sheets and spill kits would be transported and available on site.
- If mixing of chemicals is required on site prior to application, mixing shall not occur within 200 ft (60.9 m) from wetlands, waterbodies, or other known sensitive biological resources. Herbicide mixing will take place in a portable duck pond or other suitable containment areas.
- Herbicides would not be applied within 100 ft (30 m) of wetlands or waterbodies unless the EPA approved product label specifies that the herbicide being used can be safely applied to the water's edge.
- Personnel would be trained and certified/licensed as necessary to apply the herbicide using the appropriate equipment, under the appropriate environmental conditions, and following authorized application rates.
- Complete both pre and post application photographic documentation and appropriate application report form including Pesticide Applicators Report (PAR) on federal land.
- Small batches of herbicide solution would be mixed as needed and the volume needed would be carefully estimated to avoid mixing excess solution. Rinsates would be sprayed out on target invasive species at approved sites or saved short term for dilutant water to mix with new batches of herbicide solution. Equipment would be rinsed at approved application site or at centralized upland locations that are far from sensitive areas.

Herbicide Spills and Clean-up

Precautions would be taken in the transport, handing, and application of all herbicides to avoid spills in the project area. Should a spill occur, cleanup would be immediately initiated by those onsite. Since herbicides and spill kits or other response equipment would not be

stored on the pipeline ROW Donlin Gold or its contractor(s) would need to transport spill kits to the treatment site with them to allow for quick and effective cleanup response should a spill occur.

As stated above, if personnel are flown to the site by helicopter the spill kit and decontamination kit would also be transported. If a ground vehicle is used the necessary spill kit would be transported with the vehicle associated with the abatement and control treatment.

Worker Safety and Spill Notification/Reporting

When applying herbicides, workers would do so following label instructions and applicable safety requirements and procedures for the herbicide(s) being used. Any herbicide spill(s) would be reported to ADEC and the appropriate agency or agencies notified as directed under Section 5.0. All herbicide spills would be reported in accordance with ADEC and any other applicable regulatory requirements and the procedures outlined in this Plan.

3.3.3 Biological

Biological control treatment incorporates the use of live organisms to control a pest species. Biological control reduces the spread of an infestation by reducing weed vigor and seed production. Permitting the release of biological control treatment agents requires many years of host specificity testing and evaluation by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service. This type of control only is used on very large infestations (big enough to support the insect or pathogen population) and to date, has not been implemented in Alaska.[4] As stated in Section 3.3, Donlin Gold does not intend to implement or seek authorization to use biological control treatment in the project area at this time.

3.3.4 Cultural

Cultural treatment control is based on using cultural practices, such as reseeding, competition, controlled grazing or shade retention, to reduce or kill undesirable plants. Cultural control treatment techniques may overlap with mechanical control treatment techniques.

3.3.5 Combination of Methods

Depending on site specific conditions, proximity to sensitive resources, and the IS involved, a combination of methods may be considered. To aid in the determination of the appropriate method, the following matrix has been generated based on the APMC Best Management Practices guidance (2017).

[4]Invasive Plant Management Guidance, Nixon Fork Mine, Alaska, Report prepared by C. Greenstein and H. Cortes-Burns, The Alaska Natural Heritage Program, University of Alaska, Anchorage for Bureau of Land Management, Anchorage Field Office.

Table 2-2 Control Methods Matrix

Common Name	Scientific Name	Manual	Mechanical	Chemical
EDDR				
Spotted knapweed	*Centaurea stoebe*	x - Hand pull if possible at first discovery, plan for chemical follow up. #4, 16.	N/A - Mowing typically doesn't kill knapweeds; cut plants generally survive and recover to set seeds. #4, 16	**X - Aminopyralid (Milestone brand) herbicide is among the best options. Clopyralid can also be used. Plants can be treated at any time of year, but pre-flower is ideal for blocking seed production. #13, 14, 16.**
Bird vetch	*Vicia cracca*	x - Hand pull if possible at first discovery, plan for chemical follow up. #16	Plants can be mowed two or more times (through early flower) per growing season. This will reduce and contain bird vetch, but not erradicate the population. #4 and #15	**X - Aminopyralid herbicide is among the best options. Clopyralid can also be used. Plants should be treated pre-flower to early flowering stage. #4, 15**
Purple loosestrife	*Lythrum salicaria*	x - very small, new populations only. Remove entire root crown and plan for follow up. #16	N/A - Mowing is likely impractical due to wetland location. Mowing or cutting can help reduce seed production, but will not erradicate this plant. #16, 19	**X - Apply (aquatic registered) glyphosate in the full to late flower stage. Imazapyr and triclopyr are also effective. #13, 16**
waterweed	*Elodea spp.*		N/A - Mechanical control efforts can reduce biomas, but are not effective at erradicating Elodea because cut or torn fragments can float away and regenerate. Completely water body drawdown could be effective at killing Elodea, but is generally not a feasible option.	**X - Apply floridone at 5-10 ppb for 2-3 years.**
ERADICATE				
Yellow toadflax	*Linaria vulgaris*	x - Hand pull if possible at first discovery, plan for chemical follow up. #16	N/A - Mowing stimulates vegetative reproduction from the lateral roots and rhizomes. # 16	**x - Once established, this species can be difficult to control even with herbicides. Try glyphosate in early spring or late growth stage approaching maturity. #3, 20.**
White sweetclover	*Melilotus alba*	x - Hand pull if possible at first discovery, plan for chemical follow up. #16	N/A - Mowing can reduce seed production and slow spread of this species, but will not kill this plant.	**X - Treat with chlorsulfuron, aminopyralid, or** triclopyr **in pre-flower stage. #4.**
Canada thistle	*Cirsium arvense*		N/A - Mowing can reduce seed production and slow spread of this species, but will not kill this plant.	**X - Treat with aminopyralid or clopyralid. #4**
Oxeye daisy	*Leucanthemum vulgare*	x - Hand pull if possible at first discovery - carefully digging up roots; plan for chemical follow up. #17	N/A - Mowing may stimulate shoot production and subsequent flowering. #17	**X - Spray with aminopyralid very early summer before the bolt stage. #17, 20.**
Orange hawkweed and meadow hawkweed	*Hieracium aurantiacum and H. caespitosum*	N/A - Don't handpull. Stimulates growth	N/A - Mowing is counter productive and stimulates additional vegetative growth #12	**X - Spray with aminopyralid early summer during pre-flower and bolt stages. Local broadcast spraying and/or multiple visists per season maybe necessary to control seed bank and plants germinating at different times. #12.**

Table 3-2 Control Methods Matrix (continued)

Common Name	Scientific Name	Manual	Mechanical	Chemical
SUPPRESS				
Splitlip hempnettle	*Galeopsis bifida*		Planting competitive, but non-invasive grasses may help prevent hempnettle from taking over an area.	x - Control methods outside of agriculture are largely undocumented. This genus has recently developed resistence to several herbicides. #9
Bristtlestem hempnettle	*Galeopsis tetrahit*		Planting competitive, but non-invasive grasses may help prevent hempnettle from taking over an area.	x - Control methods outside of agriculture are largely undocumented. This genus has recently developed resistence to several herbicides. #9, 21
Quackgrass	*Elymus (Elytrigia) repens*		N/A - frequent mowing can prevent seed production and deplete rhizome reserves, but will not eradicate. #18	**X - treat with glyphosate. #18**
Smooth brome	*Bromus inermis*		Mowing at the boot stage or multiple mowings may offer effective control. #16	**X - Spray with glyphosate early summer before stems have elongated. Imazapyr can be used as a preemergence or early post emergent. #16**
Foxtail barley	*Hordeum jubatum*		N/A - Foxtail barley is fairly tolerant of mowing. #16	**X - The Weed Research and information Center recoomends clethodim, imazapic, sulfometuron for control of foxtail barley. #16**
Narrowleaf hawksbeard	*Crepis tectorum*			x - use aminopyralid
Reed canarygrass	*Phalaris arundinacea*		N/A - Mowing can limit seed production, but will not otherwise control reed canarygrass. Tarping can potentially control very small patches, but the tarps must extend at least two feet beyond plants - otherwise the creeping rhizomes will extend and reach daylight beyond the tarps. Mulitple tarping projects in Alaska have been unsucessful in erradicating this species. Tarping is also costly and labor intensive to install and maintain the tarps (which must remain in place for at least two years). After removing tarps, the area must be re-vegetated.	**X - treat with glyphosate or imazapyr. #13**
MONITOR				
Pineapple weed	*Matricaria matricariodes*			Monitor only
Common plantain	*Plantago major*			Monitor only
Annual Bluegrass	*Poa annua*			Monitor only
Common dandelion	*Taraxacum officinale*		Mowing does not control dandelions.	**X - 2,4-D herbicide effectively controls dandelions with fall or early summer applications.**

3.4 Monitoring

Monitoring would facilitate timely detection and appropriate response for control treatment measures, which are necessary for accomplishing long-term IS management in the project area.

IS are most detectable at the height of their growing season. Some species such as hawkweeds (Hieracium spp.) are difficult to find except while in flower (generally in early summer depending on region and site microclimate). The most effective time for herbicide

treatment varies with the species in question. Some species require early season treatments in order to be effective, other species seem to respond best to fall treatments, while other species can be treated throughout the growing season. Treatment that kills the plants prior to seed maturation is ideal when possible. Monitoring the pipeline project area for IS would occur throughout the project in conjunction with SRR monitoring activities and would continue until revegetation and IS management success criteria has been met. More site-specific monitoring may be required and implemented according to active management or ACT Plan requirements (Appendix F).

When and where appropriate, Donlin Gold would coordinate with the landowner to determine that the re-establishment of self-sustaining native vegetation communities meet performance standards for revegetation cover, and obtain written approval that additional monitoring and treatment for IS is not required.

As noted in Section 2, the list of plants to be monitored for is included as Appendix A and may be expanded by Donlin Gold as required. Additional information on IS would be obtained from the University of Alaska Center for Conservation Science, Alaska Exotic Plants Information Clearinghouse (AKEPIC) or BLM. Donlin Gold would share the annual monitoring results with landowners and AKEPIC and other appropriate agencies or applicable organizations. Two types of monitoring would be performed in the project area:

General Monitoring: General project area monitoring for IS would be conducted as part of SRR monitoring required under the Stabilization, Rehabilitation and Reclamation Plan (SRRP). In all areas affected by pipeline construction, operation, maintenance, and termination, monitoring for IS and any control treatment measures as applicable would be ongoing until SRR is completed and Donlin Gold is released from site responsibility. All areas where seeding or mulching is applied would be monitored for a period of 5 years to provide EDRR for invasive species that may arise from these activities even when weed free materials have been used. Following construction SRR, the project area would continue to be monitored for IS as part of SRR monitoring. When IS are detected and identified, control treatment measures would be determined and implemented for the targeted IS.

Specific Site Monitoring: When IS have been detected, identified and control treatment measures have been taken, consistent with the procedures outlined herein, or under an approved site/IS specific ACT Plan, the site/IS would be monitored consistent with the schedule established in the ACT Plan to determine that the intended results of the ACT Plan are being or have been accomplished or if additional control treatment is required. Site specific monitoring would continue until the required results are obtained.

Annual Monitoring Schedule

Monitoring would be scheduled to take place with consideration of location, seasonal conditions, and species:

- At the height of growing season
- Before seed maturation
- To correspond with treatment and follow-up treatment evaluation needs.

3.5 When an Invasive Species is found

A designated IS environmental manager would complete the following steps when an IS is identified within the project area.

- IS is identified and location and abundance determined
- Determination of IS management category (EDRR, eradicate, suppress or monitor)
- IS Identification Report Form Completed
- Notification to land manager/landowner as applicable
- Determine appropriate control method (see Table 3-2)
- Complete preparation of ACT Plan, PUP or other plan including an environmental analysis (required by BLM) as applicable
- Personnel that may be working in the area notified of ACT Plan or control treatment measures implementation, and the location identified for monitoring and/or avoidance
- Control treatment initiated
- Monitoring/ treatment evaluation
- Reporting: AKEPIC and NISIMS records created.

4.0 PERFORMANCE SUCCESS

Where no previous IS were identified

IS prevention and control treatment measures would be considered successful in areas where no previous IS were identified if no new IS were detected three years following pipeline construction, a maintenance action or following termination activities.

Where IS are identified and eradication or suppression was implemented

Where IS are identified, and a site/ plant specific ACT Plan or other plan was determined necessary and was prepared and implemented to eliminate the IS, 100% eradication within two years would be the performance success standard. If suppression management was the goal, then a 50% reduction within two years would be the performance success standard.

Where IS are identified and only monitoring was required

These IS are typically widespread and do not warrant large-scale management efforts. Suppression or eradication action may be explored if IS are found to be growing aggressively, in a new area not connected with other infestations, or in a sensitive area, otherwise prevention and control treatment measures would not be undertaken. The area would be considered as having met performance success if the IS is not a threat.

5.0 REPORTING REQUIREMENTS

5.1 Report Content

Implementation of the ISPMP would include the following information and reporting guidelines. Throughout construction, operation, maintenance and termination, ongoing reporting on IS prevention, mitigation and control measures would be included in IS monitoring reports.

- Survey and monitoring findings on detection, including location, identification, extent, density and site conditions would be included in monitoring reports. A site map and photographs, and/or shapefile in GIS as appropriate, would be included.
- Management/control treatment efforts that are taken, including date, location, type of treatment implemented, and status of results, if known at the time, would be provided. The report would include ongoing evaluation of success of control treatment as well as identification of the need for additional control treatment at specific sites.
- Information on implementation and success of preventative and mitigation measures, including status of equipment wash/cleaning facilities and information on the worker environmental training program would be included.
- Summary description of any revegetation efforts undertaken necessitated by IS control treatment and the current status would be included.

Appendix C provides the procedure and format for reporting the use of herbicides to the appropriate agencies and/or landowner. Appendix E provides the procedure and format for data collection and reporting IS to the appropriate agencies, organizations or landowner.

5.2 Reporting Periods

Reporting periods for IS and SRR would be coordinated and combined to facilitate a more comprehensive status report on progress in meeting the performance requirements established for both IS and SRR.

An annual report would be provided shortly after the completion of each field season summarizing the overall results of IS prevention and management, and IS status in the pipeline project area. Reporting involving IS prevention, mitigation and control treatment efforts would be submitted to those listed in Appendix B as applicable.

The primary contact for the State of Alaska would be the State Pipeline Coordinator for state owned lands. For federally owned lands managed by the BLM the primary contact would be the BLM Authorized Officer.

For Calista owned lands the Vice President of Land and Natural Resources or designee would be the primary contact. On CIRI owned lands the primary contact would be the Land Manager.

6.0 AGENCY-SPECIFIC REQUIREMENTS / AUTHORITY

6.1 State of Alaska Authority

- Alaska Department of Natural Resources
  AS 44.37.030, AS 03.05.027, AS 03.05.010, AS 03.05.030
  11 AAC 34 Plant Health and Quarantine Regulations
- Alaska Department of Environmental Conservation
  18 AAC 90
- Alaska Department of Fish and Game
  AS 16.20.036, 5 AAC 95 Fish and Game Habitat

6.2 Bureau of Land Management Authority

- Carlson-Foley Act of 1968 (PL 90-583)
- Federal Noxious Weed Act of 1974, as amended by Sec. 15, Management of Undesirable Plants on Federal Lands, 1990 (PL 93-629)
- Federal Land Policy and Management Act of 1976
- Public Rangelands Improvement Act of 1978
- Executive Order 13112, Invasive Species 1999
- Federal Seed Act of 1939 [7 USC 1551-1611]
- Federal Plant Pest Act of 1957 (7 USC, Section 150aa-jj)
- Federal Noxious Weed Act of 1974
- Plant Protection Act of 2000
- Noxious Weed Control and Eradication Act of 2004
- BLM Programmatic Environmental Impact Statement appendices.

6.3 Calista and Cook Inlet Region Incorporated (CIRI) Lands

This Plan, once approved, is intended to be comprehensive and apply to all lands within the authorized project area. Unless otherwise agreed to with the landowner, the Plan would be implemented on Calista and CIRI owned lands within the project area as well as state and federal lands.

7.0 REFERENCES

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Appendix A
Prohibited and Restricted Noxious Weeds

Appendix A is the list of the Prohibited and Restricted Noxious Weeds for the State of Alaska Administrative Code (11AAC 34.020) and those listed in Table 2-1 as Potentially Occurring.

Prohibited Noxious Weeds

Field Bindweed (*Convolvulus arvensis*)
Austrian Fieldcress (*Rorippa austriaca*)
Galensoga (*Galensoga parviflora*)
Hempnettle (*Galeopsis tetrahit*)
Horsenettle (*Solanum carolinense*)
Russian Knapweed (*Acroptilon repens*)
Blue-flowering Lettuce (*Lactuca pulchella*)
Quackgrass (*Elymus repens*)
Perennial Sowthistle (*Sonchus arvensis*)
Leafy Spurge (*Euphorbia esula*)
Canada thistle (*Cirsium arvense*)
Whitetops and its varieties (*Cardaria draba, C. pubescens, Lapidium latifolium*)
Orange Hawkweed (*Hieracium aurantiacum*)

Restricted Noxious Weeds

Annual Bluegrass (*Poa annua*), 90 seeds per pound
Blue Burr (*Lappula echinata*), 18 seeds per pound
Mustard (*Brassica juncea, Sinapis arvensis*), 36 seeds per pound
Wild Oats (*Avena fatua*), seven seeds per pound
Buckhorn Plantain (*Plantago sp.*), 90 seeds per pound
Radish (*Raphanus raphanistrum*), 27 seeds per pound
Yellow Toadflax (*Linaria vulgaris*), one seed per pound
Tufted Vetch (*Vicia cracca*), two seeds per pound
Wild Buckwheat (*Polygonum convolvulus*),

Potentially Occurring in Project Area

Purple Loosestrife *(Lythrum salicaria)*
Waterweed *(Elodea spp.)*
White sweet clover *(Melilotus alba)*
Splitlip hemptnettle *(Galeopsis bifida)*
Oxeye daisy *(Leucanthemum vulgare)*
Narrowleaf hawksbeard *(Crepis tectorum)*
Reed canarygrass *(Phalarus arundinaceae)*
Smooth brome *(Bromus inermis)*
Foxtail barley *(Hordeum jubatum)*
Pineapple-weed *(Matricaria matricardiodes)*
Common Dandelion *(Taraxacum officinale)*
Bird Vetch *(Vicia cracca)*

Purple Loosestrife *(Lythrum salicaria)*

Pineapple-weed *(Matricaria matricardiodes)*

Common Dandelion *(Taraxacum officinale)*

Waterweed *(Elodea spp.)*

White Sweet Clover *(Melilotus alba)*

Splitlip hemptnettle *(Galeopsis bifida)*

Oxeye daisy *(Leucanthemum vulgare)*

Narrowleaf hawksbeard *(Crepis tectorum)*

Reed canarygrass *(Phalarus arundinaceae)*

Smooth brome *(Bromus inermis)*

Foxtail barley *(Hordeum jubatum)*

Field Bindweed (*Convulvulus arvensis*)

Austrian Fieldcress (*Rorippa austriaca)*

Galensoga *(Galensoga parviflora)*

Horsenettle *(Solanum carolinense)*

Hempnettle *(Galeopsis tetrahit)*

Russian Knapweed *(Acroptilon repens)*

Blue-flowering Lettuce (*Lactuca pulchella*)

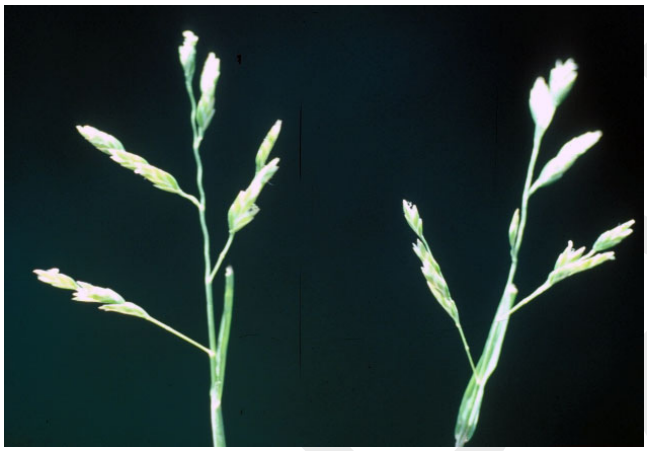
Quackgrass (*Elymus repens*)

Perennial Sowthistle (*Sonchus arvensis*)

Leafy Spurge *(Euphorbia esula)*

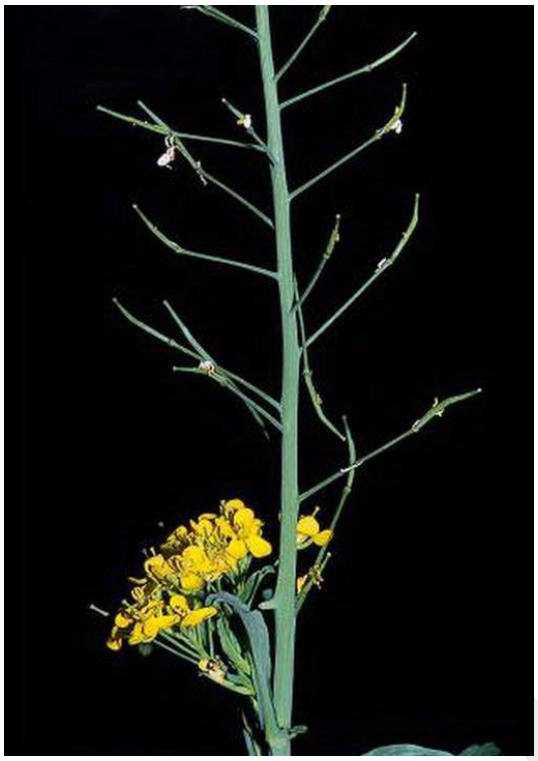
Whitetops & its varieties *(Cardaria draba, C. pubescens, Lapidium latifolium)*

Orange Hawkweed (*Hieracium aurantiacum*)



Annual Bluegrass *(Poa annua)*

Blue Burr *(Lappula echinata)*



Mustard *(Brassica juncea, Sinapis arvensis)*

Wild Oats *(Avena fatua)*

Buckhorn Plantain (*Plantago sp.*)

Radish *(Raphanus raphanistrum)*

Yellow Toadflax (*Linaria vulgaris*)

Tufted Vetch (*Vicia cracca*)

Wild Buckwheat *(Polygonum convolvulus)*

Bird Vetch (*vicia cracca*)

Appendix B
Reporting Requirements

AGENCY CONTACTS/ NOTIFICATION and REPORTING REQUIREMENTS	
Agency/Land Owner Contacts	**Purpose of Notification or Report**
State Land/Water	
State Pipeline Coordinator's Office (SPCO) Name: Jason Walsh Title: State Pipeline Coordinator Agency: State Pipeline Coordinator's Office Address: 3651 Penland Parkway Anchorage, Alaska 99508 Phone: (907) 269-6403 Email: Facsimile: (907) 269-6880	TBD
Alaska Plant Materials Center (APMC) Name: Heather Stewart Title: Invasive Weeds & Agricultural Pest Coordinator Agency: Alaska Plant Materials Center Address: 5310 South Bodenburg Spur Palmer, Alaska 99645 Phone: (907) 745-8721 Email: Heather.Stewart@alaska.gov Facsimile: (907) 746-1568	TBD
ADF&G Invasive Species Program Name: Tammy Davis Title: Coordinator, Invasive Species Program Agency: Alaska Department of Fish and Game Address: PO Box 115526 / 1255 W. 8th St. Juneau, Alaska 99811-552 Phone: (907) 465-6183 Email: tammy.davis@alaska.gov	Note the location (get a GPS coordinate if possible) and take a picture. Report find to the Alaska Department of Fish and Game, Invasive Species Program at dfg.dsf.InvasiveSpecies@alaska.gov, or call the Invasive Species Hotline: 1-877-INVASIV (1-877-468-2748). You can also contact the Invasive Species Project Leader
Federal Land	
BLM Authorized Officer (AO) Name: Bonnie Million Title: BLM Anchorage Field Manager Agency: Bureau of Land Management, Anchorage Field Office Address: 4700 BLM Road Anchorage, Alaska 99507 Phone: (907) 267-1285 Email: bmillion@blm.gov Facsimile: (907) 267-1268	TBD
BLM Name: Aliza Segal Title: Anchorage Field Office Vegetation Specialist Agency: BLM, Anchorage Field Office Address: 4700 BLM Road Anchorage, Alaska 99507 Phone: (907) 267-1398 Email: asegal@blm.gov Facsimile: (907) 267-1267	TBD
Calista Land	
Name: Rosie Barr Title: Vice President of Land & Natural Resources Address: 301 Calista Court, Suite A Anchorage, Alaska 99518 Phone: (907) 279-5516 Email: rbarr@calista.org Facsimile:	TBD

CIRI Land	
Name: Ben Mohr Title: Land Manager Address: 2525 C Street, Suite 500 Anchorage, Alaska 99503 Phone: (907) 263-5140 Email:	TBD
Donlin Gold	
Name: Dan Graham Title: Environmental and Permitting Manager Address: 4720 Business Park Blvd., Suite G-25 Anchorage, Alaska 99503 Phone: (907) 279-0200 Email: dgraham@donlingold.com	TBD
Contractor(TBD)	
Name: Title: Address: Phone: Email:	TBD
Alaska Exotic Plant Information Clearinghouse (AKEPIC)	
Name: Justin Fulkerson Title: Botanist Address: Alaska Center for Conservation Science University of Alaska - Anchorage Beatrice McDonald Hall 3211 Providence Drive Anchorage, Alaska 99508 Phone: (907) 786-6387 Email: jrfulkerson@alaska.edu	Report locations of invasive plants Physical Address: Alaska Center for Conservation Science University of Alaska Anchorage Beatrice McDonald Hall, Room 113 2400 W Campus Drive Anchorage, Alaska 99508

Appendix C
Herbicide Use Application Record Form

Herbicide Use Application Record Form

NISIMS Chemical Treatment Record Treatment Record ID _____

LOCATION INFORMATION	
BLM Project Name	
Exact Location of Treatment Site: (ex:38.468218, -108.101364)	
State:	
County:	
BLM Field Office:	

TREATMENT INFORMATION					
Treatment Date (ex: 6/1/2014)		**Treatment Start Time** (ex: 0800)		**End Time** (ex: 1600)	
Temperature (F)		**Wind Speed / Direction**		**Humidity**	
BLM PUP # (ex: WYP070-14-003-P)		**Equipment Used** (circle one)	TRUCK – ATV – UTV - BACKPACK – AIRPLANE - HELICOPTER – HANDHELD SPRAYER – WICK/WIPER – MOWER – TRACTOR – HORSEBACK SPRAYER		
Applicator Name /license #/Role (ex: John Doe/14-001/ Applicator)			**Mix Diluent** (circle one)	WATER – OIL - NONE	
Sprayer Calibration Rate (ex: 2 GALLONS/ACRE) (circle appropriate Rate)		GALLONS/ACRE OUNCES/ACRE PINTS/ACRE POUNDS/ACRE QUARTS/ACRE	**Distance to Water** (circle one)	0 TO 10 FEET - 10 TO 25 FEET 25 TO 100 FEET - GT 100 FEET	
Delivery Method (circle one)	AERIAL - GROUND	**Spray Pattern** (circle one)	BROADCAST - SPOT	**Total Acres Treated** (ex. 200)	

FOR SPOT APPLICATIONS ONLY	
Mix Amount Applied on Site (ex: 2 GALLONS)	GALLONS

CHEMICAL BRAND(s) APPLIED - In *formulated product* units				
CHEMICAL TRADE NAME (ex: Roundup Pro, Overdrive)	**MANUFACTURER** (ex: MONSANTO, BASF)	**EPA REG #** (ex: 524-475, 7969-150)	**CHEMICAL COMMON NAME** (ex: Glyphosate, Dicamba + Diflufenzopyr)	**RATE OF APPLICATION** Liquid ex: 2 QUARTS PER ACRE, , 8 FLUID OUNCES PER ACRE, 1 PERCENT SOLUTION Dry ex: 0.50 POUND PER ACRE, 1 OUNCE PER ACRE

ADJUVANTS BRAND(s) APPLIED - In *formulated product* units		
ADJUVANT BRAND NAME (ex: DYNE_AMIC)	**MANUF** (ex: HELENA CHEMICAL)	**RATE OF APPLICATION** Liquid ex: 2 QUARTS PER ACRE, , 8 FLUID OUNCES PER ACRE, 1 PERCENT SOLUTION Dry ex: 0.50 POUND PER ACRE, 1 OUNCE PER ACRE

NOTE: orm to be updated for acceptance by both tate and ederal agencies

SPECIES INFORMATION			
SPECIES CODE (ex: ACRE3)	**SPECIES COMMON NAME** (ex. Russian Knapweed)	**PLANT PHENOLOGY** (circle one)	**ESTIMATED PERCENT COVER** (circle one)
		BARE GROUND – BOLT – BUD – DORMANT – FLOWER – MATURE – PRE-BUD – ROSETTE – SEED SET – SCENESCENT - VEGETATIVE	Trace (Less than 1%) – Low (1-5%) – Medium (5-25%) - High (25-100%)
		BARE GROUND – BOLT – BUD – DORMANT – FLOWER – MATURE – PRE-BUD – ROSETTE – SEED SET – SCENESCENT - VEGETATIVE	Trace (Less than 1%) – Low (1-5%) – Medium (5-25%) - High (25-100%)
		BARE GROUND – BOLT – BUD – DORMANT – FLOWER – MATURE – PRE-BUD – ROSETTE – SEED SET – SCENESCENT - VEGETATIVE	Trace (Less than 1%) – Low (1-5%) – Medium (5-25%) - High (25-100%)

***If more species treated, attach another form and record there.

Appendix D
Standard Operating Procedure for Applying Herbicides

Standard Operating Procedure for Applying Herbicides

The following Standard Operating Procedures would apply to the use of herbicides in the Donlin Gold pipeline project area. Donlin Gold does not anticipate the need for or use of any aerial or water application of herbicides.

Herbicide Use Best Management Practices (BMP)

The following measures would be taken for any herbicide application:

- Understand the species and management requirements necessary to treat and control the IPS being targeted. Herbicide would be used if determined to be the best management option for an infestation.
- Use only USEPA, BLM and ADEC approved herbicides.
- Herbicides would be selected and BMPs would be implemented to maximize the effectiveness of the treatment on the target plant species and to minimize the potential effects on non-target plants. On BLM-managed land, use only herbicides approved by BLM in the *Record of Decision for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic EIS (September 2007)* and the *Record of Decision for Vegetation Treatments Using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Programmatic EIS (January 2016)*.
- Herbicides would be applied at the rates recommended for most effective control of the target invasive species and in accordance to the label instructions. Expert sources for recommended application rate information include UAF Cooperative Extension Service, the Pacific Northwest Weed Management Handbook (online), and the Weed Research and Information Center (University of California Davis).
- Herbicides would be applied only during periods of suitable meteorological conditions. Loss of spray from a treated area increases during high winds or low humidity. Herbicides should also not be applied during periods of dead calm (this could indicate an inversion) or when wind velocity and direction pose a risk of spray drift. Conditions at the treatment site would allow for complete and even coverage and would prevent drifting of spray onto non-target sensitive resources or areas used by humans. All label recommendations would be followed regarding suitable conditions for application.
- Herbicides would be applied using coarse sprays to minimize the potential for drift. Avoid combinations of pressure and nozzle type that would result in fine particles (mist). Add thickeners if the product label permits.
- Herbicides would be applied at the appropriate time based on the target plant's biology/phenology and available information regarding most effective growth stage for treating that plant species. Some species require very specific timing for herbicide effectiveness while other species are not as particular. Different herbicides may need to be applied at different times to the same species to be effective.

- The list of possible herbicides included in the Donlin IS herbicide treatment plan have been selected for maximum effectiveness along with the lowest risk environmental profile. Included in this consideration is minimizing potential effects to surface or ground water resources. Minimizing potential effects to water resources would again be carefully considered when developing specific ACT plans and while applying herbicides. Herbicides that are USEPA Registered for aquatic use will be selected when possible.
- Herbicides with high volatility would not be used to treat areas located adjacent to sensitive areas because of the potential for unwanted movement of herbicides to these areas.
- Herbicides with high soil mobility will be carefully considered before any use in areas where there is potential to affect water resources. When applied at labeled rates (especially spot applications) during dry weather there should be minimal risk of significant soil leaching.
- As needed to protect the efficacy of the herbicide, water would be buffered, depending on hardness, pH, and other factors.
- Safety protocols would be followed at all times for storing, mixing, transporting, handling spills, and disposing of unused herbicides and containers and would be consistent with EPA and ADEC regulations.
- All federal and state regulations regarding herbicide use would be followed at all times.
- All product labels would be read and followed by herbicide applicators. It is a violation of federal law to use an herbicide in a manner that is inconsistent with its label.
- All herbicide applicators would hold an Alaska Pesticide Applicator Certification from the Department of Environmental Conservation or would possess a Federal Pesticide Applicator License. Their assistants may be uncertified if working under the direct supervisor of the Certified lead Applicator as allowed by ADEC.
- Herbicide applicators would plan each site application to start at the back of an infested area to avoid walking through treated areas. Rubber boots are recommended for applicators. Sprays generally dry and are absorbed into plant tissue very rapidly. If needed, rubber boots should be rinsed on site away from water resources.
- Equipment would be maintained and calibrated regularly. During all applications, nozzles would be adjusted (or fixed nozzles would be selected) for larger droplet size in order to reduce drift.
- Keep records of each application, including who made the application, the active ingredient, formulation, application rate, date, time, and location.

To minimize the potential impact of herbicides on surface water and ground water resources, the following best management practices would be implemented:

- Only herbicides that are registered for use in or near water would be used in those areas.
- Only those herbicides that have a low potential toxicity would be used within areas near surface waters or in areas with a high leaching potential.

Appendix E
Documenting and Reporting Invasive Species

Two forms follow; these are being modified to create a single form that will fulfill all agency requirements

Non-Native IS Survey and Inventory Sheet (IS Identification Report Form)

Survey Date: _____/_____/_____ **Observer 1:** _____ Affiliation: _____

YYYY/MM/DD_____/_____/_____ **Observer 2:** _____Affiliation: _____

A. Site Information

Site Code: _____

Visit Type (circle one): Reconnaissance Monitoring Research Control

Is this a revisit (circle one): Yes No

Area surveyed (acres): _____ (1/10 acre = 37 ft radius, ½ acre = 83 ft radius, 1 acre = 118 ft radius)

Vegetation Community Description: _____

Disturbance Type: Pipeline

Estimated Age of Disturbance: _____

B. Location Information

Latitude: _____Longitude:_____

Collection Method: GPS or Map Precision: 0-5 0-30 0-100 0-1000 1000+ ft

Map Source: _____Map Scale: _____Map Date: _____

Milepost along pipeline or specific site:_____

Location: _____ Notes: _____

C. Survey Information

Plant Name: _____ Species Codes: _____ Est. Infested Acres: _____

Canopy Cover (%Cover): _____Stem Count: _____ Aggressiveness: Low Med High

Herbarium: Yes / No

Phenology: Seedling Rosette Bolting Bud Flower Seed Set Seedling Senescent Woody

Notes about non-native species: _____

D. Treatment Information (Complete only if weed control treatment is conducted) or Recommendations for Treatment

Control Action: None Manual: Pull/Dig/Cut Mechanical: Pull/Mow/Dig/Cut

Herbicide Date (If different from above): _____ Acres controlled: _____

Est. Hours: _____ Recommended Treatment (Month/Year): _____

Treatment Notes: _____

NISIMS Infestation Record

Infestation Record ID_____

**Indicates Required Fields*

Note: Only report one species per infestation record

LOCATION INFORMATION	
Exact Location of Infested Site*: (ex:38.468218, -108.101364)	
State*:	
County*:	
BLM Field Office*:	

INFESTATION INFORMATION				
Date* (ex. 6/1/2014)				
Species Code* (ex: ACRE3)		**Species Common Name*** (ex: Russian Knapweed)		
Estimated Percent Cover* (circle one)	Trace (Less than 1%) - Low (1-5%) - Medium (5-25%) - High (25-100%)			
Observation Method* (circle one)	DAUBENMIRE – OCCULAR – PHOTO POINT – RANDOM SAMPLE - TRANSECT			
Phenology* (circle one)	BARE GROUND – BOLT – BUD – DORMANT – FLOWER – MATURE – PRE-BUD – ROSETTE – SEED SET – SCENESCENT - VEGETATIVE			
Quantity of Plants/ Unit of Measure (Optional) (ex. 50 PER TOTAL AREA)		PER ACRE PER HECTARE PER SQUARE FEET PER SQUARE METERE PER TOTAL AREA	**Quantity Method (Optional)** (circle one)	ACTUAL ESTIMATE OCCULAR ESTIMATE TRANSECT
Infestation Distribution (Optional) (circle one)	CLUMPED – ISOLATED - PERVASIVE – SCATTERED			
Recorder* (ex: John Doe)				
Role* (Circle one)	APPLICATOR – COOPERATOR – CONTRACTOR EMPLOYEE – MAITENANCE PROVIDER			
General Text (Optional)				

Land Use Categories (Optional) (circle all that apply)	BOAT LAUNCH – BUILDINGS – BURNED AREA – CHAINED – DIRT ROAD – DOMESTIC GRAZING – DRAINAGE DITCH – FENCE LINE – FLOODPLAIN – IRRIGATION DITCH – LOGGING AREA – OHV AREA – ORV ACTIVITY – PAVED ROAD – RECREATION SITE – RURAL DEVELOPMENT – SENSITIVE SITE – TRAILHEAD – TRANSPORTATION CORRIDOR – URBAN DEVELOPMENT – UTILITY DEVELOPMENT – WATER IMPOUNDMENT – WILDLIFE HABITAT

Appendix F
Abatement and Control Treatment Plan

NOTE: The two forms that follow are being combined with agency input to generate a single form meeting all agency requirements

Abatement and Control Plan (ACT Plan)

Treatment Date: _____ **Manager of Treatment**: _____
YYYY/MM/DD

Site Code: _____ **Target Species/Plant**: _____

Acres Controlled: _____

Control Action:

None

Manual (Circle One): Pull Dig Cut

Mechanical (Circle One): Pull Mow Dig Cut Cover

Herbicide:

Product or Brand Name: _____ EPA Registration number: _____

Rate of Application: _____ Dilution applied: _____

Amount of herbicide used: _____

Name of Applicator: _____ Certification Number: _____

Treatment Notes:

_____

_____

_____

_____

Follow-Up Treatment Dates (If any):

_____

_____

Fill out before managing if Herbicide is to be applied:

Is the site in an area identified as habitat for an endangered or threatened species?

Yes or No

If Yes, which species and what category? _____

What is the predominant soil type and drainage characteristics in the treatment area?

_____

_____

_____

Identify the Vegetation Type in the treatment area:

_____

_____

Average annual precipitation in treatment area: _____ inches

Depth to groundwater in treatment area: _____ feet

Is the site within 200 foot of a water body (including surface water, wetlands and marine waters)? Yes or No

If Yes, list each water body?

_____

_____

List each public or private drinking water system within 200 foot of the treatment area:

_____

_____

Proposed buffer zone around any surface water, marine water or drinking water system identified above: _____ feet.

Is the site close/adjacent to private property? Yes or No

If Yes, how close? _____ feet.

If Yes, who owns the property? _____

Is the site close/adjacent to public property where people frequent often? Yes or No

If Yes, how close? _____

If necessary, was DEC policy for public notification followed? Please explain your procedure:

_____

_____

_____

NISIMS Mechanical Treatment Record

Treatment Record ID ____________

LOCATION INFORMATION	
BLM Project Name	
Exact Location of Treatment Site: (ex:38.468218, -108.101364)	
State:	
County:	
BLM Field Office:	

TREATMENT INFORMATION			
Treatment Start Date (ex: 6/1/2014)		**Treatment End Date** (ex: 6/1/2014)	
Recorder (ex: John Doe)			
Role (Circle one)	APPLICATOR – COOPERATOR – CONTRACTOR EMPLOYEE – MAITENANCE PROVIDER		
Mechanical Treatment Type (circle one)	BLADING – BULLDOZER – CHAINING – CHAINSAW – CHIPPING – CULTIVATION – DISKING – PLOWING – ROOT PLOWING - HOT FOAM – MECHANICAL MOWER		
Total Acres Treated:			

SPECIES INFORMATION				
SPECIES CODE (ex: ACRE3)	**SPECIES COMMON NAME** (ex: Russian Knapweed)	**PHENOLOGY** (circle one)		**ESTIMATED PERCENT COVER** (circle one)
		BARE GROUND BOLT BUD DORMANT FLOWER MATURE	PRE-BUD ROSETTE SEED SET SCENESCENT VEGETATIVE	Trace (Less than 1%) Low (1-5%) Medium (5-25%) High (25-100%)
		BARE GROUND BOLT BUD DORMANT FLOWER MATURE	PRE-BUD ROSETTE SEED SET SCENESCENT VEGETATIVE	Trace (Less than 1%) Low (1-5%) Medium (5-25%) High (25-100%)
		BARE GROUND BOLT BUD DORMANT FLOWER MATURE	PRE-BUD ROSETTE SEED SET SCENESCENT VEGETATIVE	Trace (Less than 1%) Low (1-5%) Medium (5-25%) High (25-100%)

***If more species treated, attach another form and record there.

Appendix G
Inspection and Cleaning

Equipment Cleaning Procedures

Adapted from US Department of the Interior-Bureau of Reclamation Technical Note: *88-68220-07-06: Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species,* U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Habitat Program, *Preventing Invasive Species: Inspection of Vehicles, Equipment, and Personal Gear,* and Alaska Department of Fish and Game, Invasive Species Prevention.

The spread of Invasive Species from one location to another has been linked to the use and movement of contaminated equipment. Through prevention, the spread of these species from one place to another can be limited. These species can be spread in numerous ways. For example, soil and mud that may accumulate on undersides of vehicles can carry seeds or viable fragments of pest and invasive species. Lodged material from plants or animals is often not easily recognizable by casual inspection of equipment and vehicles. In addition, foreign material can become lodged in areas of limited sight and access. Also, the use of watercraft, pumps, in-water equipment, and even waders in waters infested with these species can easily become sources for spread. Therefore, it is vital that project personnel working in areas where invasive species are present have sufficient training in inspecting and cleaning equipment. Inspection of equipment is the primary tool for preventing the introduction invasive species into an un-infested location. Properly conducted inspection and cleaning of equipment prior to entry at a new location limits introduction of these species. Personnel will be trained to look for problem areas that are not apparent upon casual observation using a systematic inspection procedure and checklists. Inspections will be performed during daylight hours or with sufficient lighting for good visibility. Inspections should be carried out on personal gear, equipment, and vehicles at a staging area dedicated to equipment and vehicle cleaning.

Inspecting and Cleaning Equipment

- Generally, equipment of all types should be cleaned at the location of last use before being moved to a new location. If this is not possible, arrange for cleaning at a facility that is specifically designed for equipment cleaning.
- If equipment is used at a location known to be infested with an invasive species, the equipment should undergo a preinspection, followed by thorough cleaning, and a final inspection before being moved off the worksite.
- At the new location, the equipment should be inspected again, preferably by someone other than the original inspector before the equipment is placed into service.
- If, on reinspection, contamination is found on the equipment, do not allow the equipment entry on the new worksite; either return the equipment to the location of last use for additional cleaning or arrange for cleaning at a location that is specifically designed for equipment cleaning.

Equipment/Supply Checklist for Inspections

Appropriate equipment needed for inspections includes flashlights, under-vehicle mirrors, PPE, remote probe viewer cameras, various hand tools, checklists of invasive species likely occurring at site of last equipment use, and portable lighting.

Inspection Protocol for Vehicles and Equipment

- Pre-clean: Remove heavy accumulations of soil and debris with appropriate tools.
- Clean: Thoroughly remove soil and debris using pressurized water. If possible, in certain situations or depending on the season, location and other conditions clean with compressed air, rather than water, in order to prevent damage to certain equipment areas such as engine wiring systems and vehicle cabs.
- While washing, if an inspection was done prior to washing, concentrate on areas the inspection revealed to have material.
- Despite these procedures, site-specific invasions are likely to occur. Perimeters of remote cleaning areas could benefit from silt fencing to filter wash water when cleaning certain kinds of equipment.
- Post-cleaning monitoring of these areas will be conducted.

Check for mud, dirt, plant material and seeds. See table below for inspection points for vehicles and equipment.

Rubber Tired Land Vehicles/Equipment

- Crevices in upper surface and panels
- Tires, rims, and fender wells
- Spare tire mounting area
- Bumpers
- Front and rear quarter panels
- Around and behind grills
- Bottom of radiator vent openings
- Brake mechanisms
- Transmission
- Stabilizer bar
- Shock absorbers
- Front and rear axles
- Beds
- Suspension units
- Exhaust systems
- Light casings and mirrors
- Engine guards
- Belly pans

Aircraft

- Floats
- Struts
- Wheels
- Interiors
- Skids

Tracked Land Vehicles/Equipment

- Crevices in upper surface and panels
- Top of axles and tensioners
- Support rollers
- Between rubber or gridded areas
- Beneath fenders
- Hatches
- Under casings
- Grills
- Belly pans

Inspect the interiors of All Vehicles/Equipment

- Beneath seats
- Beneath floor mats
- Upholstery
- Beneath foot pedals
- Inside folds of gear shift cover

Cleaning and Decontaminating Vehicles and Equipment

Pre-cleaning Methods:

- Brushing: (Physical Removal) - This method is moderately effective in removing the majority of plant material from equipment and gear
- Vacuuming: (Physical Removal) - Vacuuming equipment with a brush attachment is suggested to remove most loose particle matter, but care should be taken because small seed may become further embedded in materials

- Water Washing with High-Pressure Wash and With or Without Thermal Treatment:

  General water washing with high-pressure wash or thermal treatment is the most effective method for removing residual foreign materials, although small and embedded seeds are capable of persisting. Where known invasive materials are present, wastewater can be treated or filtered, and the waste materials double bagged and disposed of in a sanitary landfill, incinerated or buried

- High-Pressure Wash: Improvement in the design of high-pressure washing makes it the most effective means of cleaning heavily soiled and contaminated items. Not all items are capable of withstanding the pressure of this treatment, and it should only be used where applicable.

- High pressure air: In certain situations or depending on the season and temperature, location and other conditions clean with compressed air, rather than water or if water is not readily available. Also, use in situations where damage to certain equipment areas such as engine wiring systems and vehicle cabs may occur.

Inspection Protocol for Watercraft and Trailers

Watercraft and trailers are major contributors to the spread of invasive aquatic species. Detailed inspections and complete removal of all potential IS must be performed before watercraft, trailers, or equipment come in contact with water or is moved from one waterbody to another.

Clean, Drain, and Dry

Properly follow these guidelines. While on land, but before leaving a body of water.

Clean:

- Remove any visible plant or plant fragments, as well as mud or other debris. Plant material, mud, and other debris routinely contain other organisms that may be an aquatic nuisance species. Some plant species are aquatic nuisance species.
- Check trailer, including axel and wheel areas - in and around the boat itself: anchor, props and jet engines, ropes, boat bumpers, paddles.
- Clean and check and dry off all parts and equipment that came in contact with water.
- Using a car wash or home power water sprayer is not adequate to kill and/or remove elodea, zebra or quagga mussels.

Drain:

- Drain every conceivable space or item that can hold water.
- Follow factory guidelines for eliminating water from engines. All engines hold water, but jet drives on personal watercraft and other boats can hold extra water.
- Remove the drain plug from boats and put boat on an incline so that the water drains out.
- Drain live-wells, bilge, ballast tanks, and transom wells.
- Empty water out of kayaks, canoes, rafts, etc.

Dry:

- Allow everything to completely dry before launching into another body of water.
- Detailed inspections must be made before watercraft, trailers, and facility equipment in contact with raw water are moved from one water body to another.

- All plant material on the trailer should be removed before the equipment leaves the area of the water body.

The following is a list of areas that warrant special attention and where potential IS may be found:

Water Vehicles

- Bilge compartments
- Water holding tanks
- Wet and live wells
- Propellers
- Trailers
- Anchors
- Chains
- Ropes
- Ties
- Tread mats
- Traction grids

Inboard Engine

- Propeller
- Trim tab
- Input cap
- Crevices
- Water intake ports
- Rudder

Inboard/Outboard Engine

- Propeller
- Under trim tabs
- Steering components
- Cooling water intake ports

Outboard Engine

- Propeller
- Motor mounts
- Bottom drain holes
- Cooling water intake ports

Jet Motors

- Intake grate
- Impeller
- Jet discharge bowl
- Steering and reverse linkage

Cleaning and Decontaminating Personal Gear and Clothing Inspection Protocols

What to look for: Seeds, plant material, soil, and mud. Clothing, hats, socks, shoes, gloves, and jackets should be thoroughly inspected for above-listed materials. Pockets should be turned inside out to remove debris. Shoelaces and shoe tongues should be checked. Upon inspection,

pre-clean personal gear by physical removal of contaminated material with a stiff brush, lint remover, compressed air, or pressurized hot water.

Pay close attention to: the cuffs and folds of clothing, treads of boots or waders, or closures such as zippers or ties. Closures: Zippers, belts, laces or ties, buckles, straps, Velcro grips, buttons and fasteners, rivets. Loose Particle Fabric: Canvas, nylon, cotton, poly blend, wool, fleece, netting, suede.

Other: Socks and ankle grips, treads of footwear, cuffs and folds, seams, flaps, pockets, collars and hoods, ventilation openings.

Clothing and personal gear is capable of transporting IS in ways similar to vehicles and equipment. To prevent the spread of IS all personal gear and clothing should be inspected before entering and exiting the worksite. Any suspect material should be removed and properly disposed of. The following is a list of special areas of concern and where foreign material could become accidently trapped:

Closures

- Zippers
- Belts
- Laces or ties
- Buckles
- Straps
- Velcro grips
- Rivets
- Buttons and fasteners

Loose Particle Fabric

- Canvas
- Nylon
- Cotton
- Poly blend
- Wool
- Fleece
- Netting
- Suede

Other

- Flaps
- Pockets
- Seams
- Cuffs and folds
- Socks and ankle grips
- Treads of footwear
- Collars and hoods
- Ventilation openings

Pre-cleaning Methods:

- Brushing: (Physical Removal) this method is considered to be moderately effective in removing the majority of plant material from clothing, footwear, or other personnel gear. The use of a brush will remove most surface soil, plant material, and foreign matter from clothing. If there is a nap, brush with the nap rather than against it. Brushing against the nap could further embed small seeds into the weave of fabric. A combination of soft and stiff bristles of varying length is recommended for footwear and tread, while medium length and stiffness is desired for removal of soil and other matter from clothing. Follow up with a water wash or as recommended by the manufacturer.

- Vacuuming: (Physical Removal) vacuuming the article of clothing with a brush attachment is suggested to remove most loose particle matter, but care should be given, as small seed may become embedded in materials. To prevent contained plant and soil matter from being redeposited or dispersed following the cleaning process, collected matter should be double bagged and disposed of in a sanitary landfill (disposal at remote sites may include incineration or onsite burial). Follow up with a water wash or as recommended by the manufacturer.

- Use of Adhesive Roller (Physical Removal) in Conjunction with Other Physical Removal Technique

  When in the field, this method is considered to be moderately effective in removing the majority of plant material from clothing, equipment, and gear. Proper attention and care given during removal is a direct reflection of the potential efficiency of this technique. Seed and fragment materials readily attach to the adhesive sheets and are effectively lifted out of seams and the weave of loose particle fabrics. Roller sheets should be double bagged and disposed of in a sanitary landfill.

  Contaminated gear not able to be cleaned in the field would be returned to the camp for decontamination.

- Washing Machine
  Used to clean clothing, hats, socks, gloves, and jackets at field construction camps.

Appendix H
HACCP Plans

DONLIN GOLD GAS PIPELINE EQUIPMENT HAZARD ANYLYSIS CRITICAL CONTROL POINT (HACCP) PLAN

HACCP Step 1 – Activity Description	
DONLIN GOLD GAS PIPELINE– Anchorage District Office	
Project Description: Terrestrial equipment use for construction of natural gas pipeline	Contact Person: TBD Phone: (907) Email:

Activity Description
i.e., Who; What; Where; When; How; Why

WHO: Donlin Gold LLC
(Donlin Gold)
WHAT: Donlin Gold proposes to construct a 315 mile (507 km) natural gas pipeline.

WHERE: The proposed 14-inch (356 mm) natural gas pipeline approximately 315 miles long (507 km) would originate at the west end of the Beluga Gas Field, approximately 30 miles (48 km) northwest of Anchorage at a tie-in near Beluga within the Susitna Flats State Game Refuge located in the Matanuska-Susitna Borough and would run to the proposed Donlin Gold mine located in Southwest Alaska as shown in Figure 1-1 attached. The pipeline route initiates at the Beluga Gas Pipeline (BPL) (natural gas source) which would be designated milepost MP 0. (The pipeline would receive booster compression supplied by one compressor station located near the BPL tie-in at approximately MP 0.4). The route then proceeds north, traversing the east flank of Little Mount Susitna to the Skwentna River (approximately MP 50), and then parallels the Skwentna River westerly to Puntilla Lake (approximately MP 102). The route crosses the Alaska Range following primarily the Jones River Valley. The pipeline route then continues southwest to the Farewell area (approximately MP 157), paralleling the Alaska Range until crossing the Kuskokwim River (approximately MP 240). Beyond the Kuskokwim River, the route primarily follows ridgelines for more than 80 miles (129 km) toward the west, to the proposed Donlin Gold mine site that is the pipeline terminus at approximately MP 315, about 10 miles (16 km) north of the village of Crooked Creek.

WHEN: Following receipt of project authorizations. The project area is divided into 2 construction spreads. Approximately 55% of the 188.6 miles (304 km) of Spread 1 would be winter construction and approximately 88% of the 126.6 miles (204 km) of Spread 2 would be winter construction. The remainder would be summer construction.

HOW: Using construction equipment. Equipment to be used in construction would either be owned by Donlin and/or its contractors and kept on-site or transported from various locations to the project area. The equipment would include both track and wheel equipment and in some cases the necessary equipment to transport it to the various construction sites locations. The transportation of the equipment to the project area and use of the equipment in the project area may allow introduction of non-native species. With the transport and use of construction equipment, comes a heightened threat of invasive species (IS) spread. This HACCP plan aims to mitigate potential ecological damage from non-native invasive species and to prevent their establishment in the pipeline project area.

WHY: To facilitate construction and use of the natural gas pipeline in support of the proposed Donlin Gold mine project.

HACCP Step 2 – Activity Flow Chart

Outline Sequential Tasks of Activity

Task 1	Title: Terrestrial equipment transported to project area
	Description: Transport equipment to project area, off-loaded at designated checkpoint.

Task 2	Title: Stage terrestrial equipment and commence construction
	Description: Operator mobilizes equipment to specific Section location within project area and prepares to commence construction.

Task 3	Title: Terrestrial equipment utilization within construction Section.
	Description: Equipment is operated in the Section of the Project area.

Task 4	Title: Stage equipment for move to another construction Section.
	Description: Equipment operators move equipment to demobilization checkpoint and stage for move to next construction section or demobilization from project area.

Task 5	Title: Equipment moved to next construction section or demobilized
	Description: Equipment moved to new Section for construction or demobilized from project area.

HACCP Step 3 – Identify Potential Non-Targets

Non-Targets That May Potentially Be Moved/Introduced
Vertebrates: None
Invertebrates: None
Plants: ***Prohibited Noxious Weeds:*** Bindweed, field (*Convulvulus arvensis*) Fieldcress, Austrian (*Rorippa austriaca)* Galensoga *(Galensoga parviflora)* Hempnettle *(Galeopsis tetrahit)* Horsenettle *(Solanum carolinense)* Knapweed, Russian *(Acroptilon repens)* Lettuce, blue-flowering (*Lactuca pulchella*) Quackgrass *(Elymus repens)* Sowthistle, perennial (*Sonchus arvensis)* Spurge, leafy *(Euphorbia esula)* Thistle, Canada *(Cirsium arvense)* Whitetops and its varieties *(Cardaria draba, C. pubescens, Lapidium latifolium)* Purple loosestrife (*Lythrum salicaria)* Orange Hawkweed *(Hieraciym aurantiacum)* ***Restricted Noxious Weeds:*** Annual bluegrass *(Poa annua)* *Blue burr (Lappula echinata)* Mustard *(Brassica juncea, Sinapis arvensis)* Oats, wild *(Avena fatua)* Plantain, buckhorn *(Plantago* sp.) Radish *(Raphanus raphanistrum)* Toadflax, yellow *(Linaria vulgaris)* Vetch, tufted *(Vicia cracca)* 2 seeds per pound Wild buckwheat *(Polygonum convolvulus)* **These are additional IS that have been observed or potentially occurring in or near the project area.** Purple Loosestrife *(Lythrum salicaria)* Waterweed *(Elodea spp.)* White sweet clover *(Melilotus alba)* Splitlip hemptnettle *(Galeopsis bifida)* Oxeye daisy *(Leucanthemum vulgare)* Narrowleaf hawksbeard *(Crepis tectorum)* Reed canarygrass *(Phalarus arundinaceae)* Smooth brome *(Bromus inermis)* Foxtail barley *(Hordeum jubatum)* Pineapple-weed *(Matricaria matricardiodes)* Common Dandelion *(Taraxacum officinale)*

Other Organisms: (pathogens, parasites, etc.): None

HACCP Step 4 – Non-Target Analysis Worksheet

1 **Tasks** (From Step 2)	2 **Potential Non-targets** (From Step 3)	3 **Risk Assessment** Are any non-targets significant? Yes or No	4 **Justification** Justify your answer in Column 3	5 **Control** What control measures can be applied during this task to reduce the risk of non-targets?	6 **CCP?** Is this task a CCP? Yes or No	7 **Justification** Justify your answer in Column 6
Task # 1 Title: Transport equipment to project area, offload at designated checkpoint	Vertebrates None	No	No Vertebrates	None	No	No Vertebrates
	Invertebrates None	No	No Invertebrates	None	No	No Invertebrates
	IS As Listed	**Yes**	Would produce different species assemblage within project area	Visual Inspection, with removal of IS	**Yes**	Mobilizing potentially contaminated equipment may bring IS to project area.
	Others None	No	No Others	None	No	No Others
Task # 2 Title: Stage equipment and commence construction	Vertebrates None	No	No Vertebrates	None	No	No Vertebrates
	Invertebrates None	No	No Invertebrates	None	No	No Invertebrates
	IS	yes	May be IS encountered along construction corridor.	Avoid deviating travel from project area	No	High Risk NTS are better controlled prior to or during Task#1
	Others None	No	No Others	None	No	No Others
Task # 3 Title: Equipment utilization within construction Section	Vertebrates None	No	No Vertebrates	None	No	No Vertebrates
	Invertebrates None	No	No Invertebrates	None	No	No Invertebrates
	IS As Listed	**Yes**	If existing IS encountered employ procedures in ISPMP	Stay within construction area. Follow procedures in ISPMP.	**Yes**	Allowing un-controlled access to the area could introduce IS to area.
	Others None	No	No Others	None	No	No Others

HACCP Step 4 – Non-Target Analysis Worksheet

1 **Tasks** (From Step 2)	2 **Potential Non-targets** (From Step 3)	3 **Risk Assessment** Are any non- targets significant? Yes or No	4 **Justification** Justify your answer in Column 3	5 **Control** What control measures can be applied during this task to reduce the risk of non-targets?	6 **CCP?** Is this task a CCP? Yes or No	7 **Justification** Justify your answer in Column 6
Task # 4 Title: Stage equipment for move to another construction Section	Vertebrates None	No	No Vertebrates	None	No	No Vertebrates
	Invertebrates None	No	No Invertebrates	None	No	No Invertebrates
	IS	No	No differences in species assemblage	Avoid deviating travel from established corridors	No	High Risk NTS are better controlled during Task# 1 and Task# 2
	Others None	No	No Others	None	No	No Others
Task # 5 Title: Equipment moved to next construction Section or demobilized	Vertebrates None	No	No Vertebrates	None	No	No Vertebrates
	Invertebrates None	No	No Invertebrates	None	No	No Invertebrates
	IS As Listed	**Yes**	Would produce different species assemblage between origin and destination sites	Visual Inspection with removal of IS before move or demobilization	**Yes**	Demobilizing potentially contaminated equipment may transmit IS to other locations
	Others None	No	No Others	None	No	No Others

HACCP Step 5 – Non-Target Risk Action Plan (NTRAP)

(Use this form for any "Yes" from Column 6 of HACCP Step 4, Non-Target Analysis Worksheet) 1 page for each Critical Control Point		
Project Description (from Step 1)		Terrestrial Equipment Use for Construction of Natural Gas Pipeline
Critical Control Point		Transport to project area, off-load at designated checkpoint
Significant Non-Target(s) (Step 4, column 3)		Prohibited Noxious/ Restricted Noxious IS as listed
Control Measure(s) (Step 4, column 5)		Visual Inspection with removal of IS
Prescribed ranges, limits, or criteria for control measure(s): (PRLC)		If delivered soiled, remove all mud and visible vegetative debris, and double-check all exposed areas while continuing removal until no mud or debris remain. If delivered clean, double-check exposed areas for any remaining debris, and remove if necessary.
Monitoring the Control Measures(s)		Have another Environmental Inspector repeat the control measure.
	Who?	Environmental Inspector
	How?	Visual Observation/inspection and employ ISPMP
	Where?	Designated checkpoint
	How Often?	Every time equipment is unloaded from delivery vehicle
Corrective Action(s) if Control Measures Fail **(or PRLC cannot be met)**		Have another Environmental Inspector repeat the control measure
Supporting Documents (***For example, Management Plan, Checklist, Decontamination Techniques, SOPs, Scientific Journal Articles, etc.***)		
ISPMP		
Development Team Members		
Date Developed:		**Date(s) Reviewed:**

HACCP Step 5 – Non-Target Risk Action Plan (NTRAP)

If this fails, repeat cleaning procedures. **(Use this form for any "Yes" from Column 6 of HACCP Step 4, Non-Target Analysis Worksheet)** **1 page for each Critical Control Point**		
Project Description (from Step 1)		Terrestrial Equipment Use for Construction of Natural Gas Pipeline
Critical Control Point		Equipment Utilization within Construction Section
Significant Non-Target(s) (Step 4, column 3)		Prohibited Noxious/ Restricted Noxious IS as listed
Control Measure(s) (Step 4, column 5)		Control access, prevent introduction and dispersal
Prescribed ranges, limits, or criteria for control measure(s): (PRLC)		Implement ISPMP and minimize use of disturbed areas to allow adequate time for revegetation with native species.
Monitoring the Control Measures(s)		
	Who?	Environmental Inspector
	How?	Visual Observation / inspection and employ ISPMP
	Where?	
	How Often?	
Corrective Action(s) if Control Measures Fail (or PRLC cannot be met)		
Supporting Documents (*For example, Management Plan, Checklist, Decontamination Techniques, SOPs, Scientific Journal Articles, etc*.)		
ISPMP		
Development Team Members		
Date Developed:		**Date(s) Reviewed:**

HACCP Step 5 – Non-Target Risk Action Plan (NTRAP)

(Use this form for any "Yes" from Column 6 of HACCP Step 4, Non-Target Analysis Worksheet) 1 page for each Critical Control Point		
Project Description (from Step 1)		Terrestrial Equipment Use for Construction of Natural Gas Pipeline
Critical Control Point		Equipment moved to next construction Section or demobilized
Significant Non-Target(s) (Step 4, column 3)		Prohibited Noxious/ Restricted Noxious IS as listed
Control Measure(s) (Step 4, column 5)		Visual inspection with removal of IS before equipment moved or demobilization occurs
Prescribed ranges, limits, or criteria for control measure(s): (PRLC)		If soiled remove all mud and vegetative material until no mud or vegetative debris remain. If visibly clean after operation, double-check exposed arears for any remaining debris and remove if necessary before loading and / or transport
Monitoring the Control Measures(s)		
	Who?	Environmental Inspector
	How?	Visual Observation / inspection and employ ISPMP
	Where?	Designated checkpoint
	How Often?	Every time equipment is readied for trailering and/ or transport
Corrective Action(s) if Control Measures Fail (or PRLC cannot be met)		Have another Environmental Inspector repeat the control measure If this fails, repeat cleaning procedures
Supporting Documents (*For example, Management Plan, Checklist, Decontamination Techniques, SOPs, Scientific Journal Articles, etc*.)		
ISPMP		
Development Team Members		
Date Developed:		**Date(s) Reviewed:**

HACCP Step 5 – Non-Target Risk Action Plan (NTRAP)

(Use this form for any "Yes" from Column 6 of HACCP Step 4, Non-Target Analysis Worksheet) 1 page for each Critical Control Point		
Project Description (from Step 1)		Terrestrial Equipment Use for Construction of Natural Gas Pipeline
Critical Control Point		Stage equipment and commence construction
Significant Non-Target(s) (Step 4, column 3)		Prohibited Noxious/ Restricted Noxious IS as listed
Control Measure(s) (Step 4, column 5)		Control access to project area
Prescribed ranges, limits, or criteria for control measure(s): (PRLC)		Prevent introduction of IS and monitor for existing stands
Monitoring the Control Measures(s)		
	Who?	Environmental Inspector
	How?	Visual Observation / inspection and employ ISPMP
	Where?	Every worksite
	How Often?	Ongoing during equipment operation
Corrective Action(s) if Control Measures Fail (or PRLC cannot be met)		Have another Environmental Inspector repeat the control measure
Supporting Documents (*For example, Management Plan, Checklist, Decontamination Techniques, SOPs, Scientific Journal Articles, etc*.)		
ISPMP		
Development Team Members		
Date Developed:		**Date(s) Reviewed:**

Attachment A
Terrestrial Equipment (including vehicles)

Attachment B
Fresh Water Vessels

Fresh Water Vessels Form (to be included if small boats to be used[5])

[5] No small fresh water boats are planned for use at this time

Attachment C
Aircraft

Aircraft Form (to be developed)

Attachment D
Materials and Supplies

Material and Supply Forms (to be developed)

Attachment E
Personnel and Gear

Personnel and Gear Form (to be developed)

Attachment F
Public Use

Public Use Form (to be developed)

Attachment G
Natural Processes

Natural processes Form (to be developed)

Attachment H
Existing Populations

Existing Population (to be developed)