

ASRC Umbrella Mitigation Bank PROSPECTUS

North Slope Borough, Alaska



Prepared for:
**The U.S. Army Corps of Engineers
Alaska District**

Submitted by:
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HARRISON BAY
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ENCLOSURE 1

1 Introduction

1.1 Scope of Document

This document proposes and describes the establishment, use, operation, and maintenance of an umbrella mitigation bank to offer credits for compensatory mitigation of wetland impacts on the North Slope of Alaska.

Arctic Slope Regional Corporation (ASRC) developed this Mitigation Bank Prospectus (Prospectus) for submission to the U.S Army Corps of Engineers, Alaska District Regulatory Division for review and approval for creation of an ASRC Umbrella Mitigation Bank within the North Slope Borough, Alaska. For the purpose of this Prospectus, ASRC is including three potential properties for mitigation banks to be incorporated under the larger umbrella bank. After review and approval from the U.S Army Corps of Engineers (USACE) and the other Interagency Review Team (IRT) members, ASRC will select which mitigation bank properties to include under the umbrella bank.

1.2 About ASRC

ASRC is an Alaska Native Regional Corporation created at the direction of Congress under the terms of the Alaska Native Claims Settlement Act of 1971 (“ANCSA”). See 43 U.S.C. § 1606. This landmark legislation extinguished Alaskan aboriginal land rights and authorized and directed Alaska Natives to adopt a western corporate model to manage lands, funds and natural resources. Although the western corporate model was a new concept for Alaska Natives, we have been able to successfully manage our assets consistent with our sound stewardship and values. Under ANCSA, Iñupiat Eskimos living on the North Slope in 1971 were enrolled as shareholders in ASRC. ASRC has since issued additional shares to their descendants, giving ASRC a shareholder base of approximately 11,000 Iñupiat Eskimos.

Through ANCSA, Congress created ASRC and directed that we use the North Slope's natural resources to benefit the Iñupiat people financially and culturally. Congress authorized ASRC “to provide benefits to its shareholders who are Natives or descendants of Natives or to its shareholders’ immediate family members who are Natives or descendants of Natives to promote the *health, education or welfare* of such shareholders or family members.” 43 U.S.C. § 1606(r) (emphasis added). Consistent with this unique legislation, ASRC is a for-profit business that is committed both to providing sound returns to our shareholders and to preserving our Iñupiat way of life, culture and traditions.

Operating in one of the least hospitable natural climates in the world, we have built businesses to provide jobs for our people, tax revenues for our Villages and our Borough, and cash dividends for our shareholders. At the same time, we have integrated maintenance and protection of the Iñupiat cultural and traditional practices into the ASRC business.

ASRC is uniquely positioned and has strong incentives to develop lands on the North Slope as well as protect areas for future generations.

1.3 Project Description

As there is a hierarchy set forth in the 2008 Final Rule stating that a preference is given to mitigation banks in a given service area over other types of mitigation, ASRC proposes development of an umbrella mitigation bank consisting of two to three properties on the North Slope. The purpose of the mitigation bank is to provide credits for wetland impacts on the North Slope of Alaska where there are currently no mitigation banks available in the region. The bank credits would be used to offset future unavoidable wetland impacts that could result from various development projects in Northern Alaska.

Some of the potential projects on the horizon for the North Slope that will be requiring mitigation are:

- Greater Moose's Tooth Unit satellite developments
- CD5 development; depending on actual construction start up
- Other Colville River Unit developments
- Point Thomson development
- Umiat area developments
- Alaska Gasline Project
- Coal development
- Chukchi and Beaufort Sea developments
- State of Alaska's Roads to Resources Program
- North Slope community infrastructure developments

A number of these projects are quite large in scope and would require access to large numbers of mitigation credits to offset their unavoidable wetland impacts.

2 Establishment and Operation

2.1 Bank Enabling Instrument

By way of this Prospectus, ASRC proposes the creation of an umbrella mitigation bank and to become a qualified mitigation bank sponsor on the North Slope. Following approval of this Prospectus, the ASRC Umbrella Mitigation Bank will be detailed in the Bank Enabling Instrument in accordance with the Final Rule. The Bank Enabling Instrument will provide the framework for the establishment and operation of the umbrella bank.

The document will address the following components of the mitigation bank:

- Service Area
- Authorities
- Ownership of bank and banking credits
- Reporting protocols and accounting procedures
- Financial arrangements to provide long-term management
- Methodology for determining bank credits
- Conservation easement
- Bank maintenance, inspection, and a mechanism to address issues
- Default closure provisions
- Process for adding additional banks to umbrella bank
- Additional information required by the USACE

The Bank Enabling Instrument will authorize the ASRC Umbrella Mitigation Bank to provide compensatory mitigation for approved permits issued by the USACE.

3 Bank Objectives

3.1 Purpose and Objectives

The purpose of the ASRC Umbrella Mitigation Bank is to create a multi-user mitigation bank on the North Slope of Alaska, providing effective compensatory mitigation for the functions and services for waters of the United States. Bank credits will be used to offset future unavoidable impacts to wetland complexes and aquatic resources resulting from development projects likely to occur on the North Slope. This will provide an alternative to permittee-responsible compensatory mitigation where on-site compensation is not ecologically preferable and/or feasible.

Objectives of the ASRC Umbrella Mitigation Bank include the preservation of three separate parcels of land which equal up to 26,800 acres in their current pristine state. These lands consist of extremely high value wetland complexes supporting a wide variety of bird, fish, and mammal habitats along the Colville River and Beaufort Sea coast. These proposed banks offer some very large tracts of unique and important habitat areas to meet the objectives identified by the Final Rule. *Individually, two of these mitigation banks could very well be some of the largest banks in the country, offering protection on a large scale not seen or available elsewhere.*

3.2 Bank Locations and General Descriptions

The proposed mitigation bank shall be established as an umbrella bank, consisting of two to three properties; the Upper Colville Bank, the Starfish Bluff Bank, and the Cape Halkett Bank (Figure 1).

Two of the sites, the Upper Colville Bank and Starfish Bluff Bank, are located approximately 30 miles apart along the middle and upper sections of the Colville River. The Colville River is the largest river in the American/Alaskan Arctic with a length of approximately 428 miles and plays a critical role in the overall North Slope ecosystem as it feeds into the biologically important Colville River Delta. Both these banks contain unique ecological values and functions that are not widely found in other areas of the North Slope. The habitats contained within these banks could see impacts due to future oil/gas, road, and pipeline development in the region.

The third proposed bank at Cape Halkett is located on the coast of the Beaufort Sea at the northwestern part of Harrison Bay. The Cape Halkett Bank contains acreage that is very similar to coastal development areas and provides high quality, high value coastal habitats for mitigation purposes.

3.2.1 Upper Colville Bank Property and Legal Description and Ownership

The Upper Colville Bank is located approximately 90 miles upstream of Umiat and contains some very valuable habitats in the upper stretch of the river.

The Upper Colville property is an 11,413 acre parcel located along the Colville River between the Awuna and Kurupa Rivers (Figure 2). The property is described as: Township 4 South, Range 7 West, Sections 16, 17, 19, 20, 21, 30, and Township 4 South, Range 8 West, Sections, 22-29, 32-36, and Township 5 South, Range 8 West, Sections, 3-6 of the Umiat Meridian. This area encompasses approximately 12.5 continuous river miles of the upper Colville River, as well as inclusion of some valuable riparian buffer zones.

ASRC owns this property under simple fee ownership as part of its ANCSA entitlement. The lands within this bank were granted to ASRC in Land Patents 50-95-0619 /50-2011-006 and include the bed of the Colville River. (Attachment 1)

The state of Alaska released its interest to the bed of the Colville River upstream of Umiat for these lands to be conveyed to ASRC pursuant to the Partial Consent Judgment N. A78-069 CIV U.S. District Court, District of Alaska, dated December 7, 1984, by issuing State of Alaska Quitclaim Deed No. 1213 on February 18, 1993. (Attachment 4)

These lands have been surveyed and there are no liens against them.

3.2.2 Starfish Bluff Bank Property and Legal Description and Ownership

The Starfish Bluff Bank is located approximately 40 miles upstream of Umiat and contains some very valuable habitats in the middle stretch of the river.

The Starfish Bluff property is a 10,787 acre parcel located along the Colville River just downstream of the confluence with the Killik River (Figure 3). The property is described as: Township 4 South, Range 10 West, Sections 16-21, 26-30, 34, 35 and Township 4 South, Range 11 West, Sections 21-27 of the Umiat Meridian. This area encompasses approximately 10.5 continuous river miles of the middle Colville River and associated two mile wide river plain.

ASRC owns this property under simple fee ownership as part of its ANCSA entitlement. The lands within this bank were granted to ASRC in Land Patents 50-95-0619 /50-2009-0395 and include the bed of the Colville River. (Attachment 2)

The state of Alaska released its interest to the bed of the Colville River upstream of Umiat for these lands to be conveyed to ASRC pursuant to the Partial Consent Judgment N. A78-069 CIV U.S. District Court, District of Alaska, dated December 7, 1984, by issuing State of Alaska Quitclaim Deed No. 1213 on February 18, 1993. (Attachment 4)

These lands have been surveyed and there are no liens against them.

3.2.3 Cape Halkett Bank Property and Legal Description and Ownership

The Cape Halkett Bank is located along the coast on the northwestern edge of Harrison Bay and contains valuable wetlands that support important feeding and nesting areas used by migratory waterfowl. This area is also important to the Teshekpuk Caribou Herd.

The Cape Halkett property is an approximately 4,600 acre parcel located along the Beaufort Sea

on the northern part of Harrison Bay. (Figure 4) The property is described as: Township 17 North Range 2 West Sections 2,11,12,13 (excluding 2.07 surface acres), 24,25,36 (fractional), E1/2, E1/2W1/2 and Township 17 North Range 1 West Sections 7,17,18,19,20,29, and 30 of the Umiat Meridian.

ASRC owns the majority of this property under simple fee ownership as part of its ANCSA entitlement. The lands within this bank were granted to ASRC in Land Interim Conveyance 468. ASRC does not own the subsurface of Township 17 North Range 1 West Section 18 and Township 17 North Range 2 West Section 13. The subsurface of these two sections is owned by the Trillium Corporation. There is no provision requiring ASRC to grant access to the subsurface owner for these two sections and therefore has no impact on any surface conservation easement placed on these lands. The lands at Cape Halkett have not been surveyed, although BLM has tentative plans to survey these lands during the summer of 2012. There are no liens against these lands. (Attachment 3)

4 Service Area

4.1 Proposed Geographic and Service Area

The ASRC Umbrella Mitigation Bank will provide compensatory mitigation credits for the projects located within the North Slope Borough, Alaska. Because of a lack of available private lands appropriate for mitigation banks in the region, ASRC proposes a service area encompassing the entire North Slope Borough area and all watersheds within. This will provide the most flexibility in properly providing mitigation opportunities within the region that is being impacted. (Figure 5 and 6)

5 Mitigation Bank Need and Technical Feasibility

5.1 General Need for a Mitigation Bank

There are currently no mitigation banks on the North Slope of Alaska, and only two approved in the state according to the USACE Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS). Both of these approved banks are located in the southcentral part of the state. With continued North Slope development and new projects, some of which are very large, being proposed, it is important to be able to mitigate these projects with mitigation credits provided in the region. ASRC lands are well suited for this purpose. (Figure 7)

Increasing long-term development puts some of these areas at risk for possible impacts. All three of ASRC's mitigation bank properties have foreseeable potential impacts. The Upper Colville and Starfish Bluff banks are surrounded by acreage that is available for oil and gas leasing by ASRC, Bureau of Land Management (BLM), and the State of Alaska. While these banks are currently some distance from current infrastructure, this could change with new roads and/or pipelines tied to a number of the major projects on the horizon; such as the State of Alaska's Road to Resources Program's, Foothills West Transportation Access Project, development of an in-state gas pipeline and/or Chukchi Sea development.

Establishment of an ASRC mitigation bank will provide many ecological and economic benefits for the region including:

- Long-term preservation of important large continuous river corridor habitats along the Colville River; approximately 10.5 miles of river corridor for the Starfish Bluff Bank and approximately 12.5 miles of river corridor for the Upper Colville Bank;
- Preservation of high value coastal environments;
- Preservation of critical habitat for threatened species;
- Preservation of anadromous fish streams to include salmon spawning habitat;
- Preservation of resident fish species habitat;
- Preservation of various migrating waterfowl habitats ;
- Preservation of raptor nesting and forage areas;
- Preservation of important moose habitat and movement corridors;
- Preservation of important riparian and buffer zones;
- Preservation of local subsistence use areas;
- Preservation of low impact recreational use areas;
- Allowing appropriate mitigation of development projects to occur within the impacted region; and

- Providing employment of local North Slope residents in the long-term oversight and management of the bank properties.

5.2 Feasibility of an Umbrella Mitigation Bank

The feasibility of preserving wetlands within the ASRC mitigation bank sites is considered to be excellent. All three bank sites are currently fully functional and in a pristine state.

Long-term management of the bank properties will help to preserve species and a wide variety of habitats within the bank lands in perpetuity. The bank management will limit disturbances that could degrade habitats within the bank properties.

The potential to create or enhance wetlands within the banks is limited due to their mostly pristine nature, although there may be opportunity for some small lifts if minor disturbances or debris is identified.

6 Bank Ownership and Long-term Management

6.1 Long-term Ownership and Management

As the current property owner, ASRC will retain ownership through the entire bank process and after the bank is active. A conservation easement will be granted in perpetuity and held and managed by a third party entity. ASRC will establish and maintain a dedicated account with adequate funds to provide monitoring, reporting, maintenance, and stewardship. This fund will be available to ASRC or to the third party entity for monitoring and stewardship purposes. ASRC may elect dedicate staff to specifically monitor and provide oversight of the bank lands.

By agreement between ASRC, the conservation easement holder and the USACE, along with input from the IRT, ASRC will allow for inspection of the properties on a periodic basis for any violations of the restrictions in the conservation easement. The results of the monitoring will be reported to the USACE upon completion of required inspections.

6.2 Proposed Credit Release Schedule and Ratios

All credits shall be available for purchase when the Bank Enabling Instrument has been approved and the appropriate financial and real estate assurances have been met. Mitigation ratios shall be assigned by the USACE, Alaska District Regulatory Division.

6.3 Conservation Easement

As part of the conservation easement, certain activities will be permitted while others will be prohibited.

Allowed uses of the bank properties under the conservations easement will be:

- Recreational camping, hiking, fishing, and boating to the general public, as granted by the Colville River Easement and only limited to the lands described in the easement outlined in the 1984 Stipulation, Agreement and Consent to Entry of the Partial Judgment between the State of Alaska, ASRC, SOHIO Alaska Petroleum Company, and the United States. *Note: this agreement does not apply to the lands at Cape Halkett.*
- All subsistence activities over bank properties to include the use of snow machines.
- Winter snow trail or ice roads if it can be demonstrated that no long-term negative impacts will occur on bank properties.
- Winter use for access and acquisition of seismic data on and over bank properties if it can be demonstrated that no long-term negative impacts will occur.
- Scientific studies that are approved and will have no long-term impact on bank properties.

Prohibited uses of the bank properties under the conservations easement will be:

- Sport hunting in accordance with current ASRC land policies. This prohibited activity could be allowed if ASRC land polices where to change anytime in the future.
- Building of all-season roads.
- Temporary or permanent facilities constructed on properties unrelated to subsistence activities.

Authorized activities on bank properties by the grantor:

- Under take measures to protect, restore, or enhance waterways and wetlands on the protected property. Prior to taking any such actions, the USACE will be consulted and plans approved.
- Install signage if ever deemed necessary or appropriate.
- Operate aircraft and motorized vehicles for the remediation and/or maintenance of any authorized activity.

6.4 Long-term Management Plan

Goals for the long-term management of the bank will be developed by ASRC and the USACE, with input from the IRT members to create a set of strategies for the long-term management and monitoring of all banks properties.

6.5 Long-term Functional Goals

The long-term functional goal is to maintain the current system as it is in its pristine state for perpetuity providing protections to the very unique riverine ecosystems as well as critical coastal habitats.

7 Sponsor Qualifications

7.1 Bank Sponsor Qualifications

Arctic Slope Regional Corporation is recognized by the Alaska State Chamber of Commerce, Alaska Business Monthly, and other business leaders as the 2010 top Alaska-owned and operated company. This is the 17th consecutive year that ASRC has ranked #1 on the 'Top 49ers' list, based on the prior year's gross revenues.

In 2011, ASRC's revenues topped \$2.5 billion. The corporation has five major business segments, to include petroleum refining and marketing, energy support services, construction, government services and resource development.

ASRC owns and manages nearly 5 million acres on the North Slope through its Land Department. ASRC has staff with expertise in land management, budgeting, finance, law, and planning. In addition, ASRC subsidiary companies have expertise in environmental sciences, including wetlands, hydrology, fisheries, and wildlife studies. ASRC also has the ability to hire outside technical consultants if necessary to meet any technical requirements of the ASRC Umbrella Mitigation Bank.

Because of ASRC's financial strength, access to a wide variety of resources, and its deep understanding of regional issues, ASRC is well suited to operate and maintain a mitigation bank on the North Slope of Alaska.

8 Ecological and Hydrologic Suitability

8.1 Bank Properties

The Upper Colville and Starfish Bluff banks are both located along the Colville River. The Colville River and Colville River Delta is one of the most biologically productive and diverse riparian areas in the Alaskan Arctic and is considered an Aquatic Resource of National Importance by the U.S. Fish and Wildlife and the Environmental Protection Agency. It is by far the largest and most complex delta in northern Alaska with a watershed draining about 30 percent of the region. The Colville River and associated wetlands, lakes, and ponds support many species of fish and the wetlands provide breeding habitat for numerous species of waterfowl including tundra swans, black brant, greater white-fronted geese, spectacled eiders, and yellow-billed loons.

The Cape Halkett bank provides breeding habitat for numerous species of waterfowl as well as breeding range habitat for spectacled and steller's eiders. This bank is also identified as critical habitat for polar bears by designation of the U.S. Fish & Wildlife Service.

The three proposed banks sites will meet the preservation criteria described under 33 CFR 33.2.3(h) upon implementation of the conservation easement.

8.2 Bank Evaluation Dataset

The three bank properties fall under a project called the **National Petroleum Reserve-Alaska (NPR-A), Earth Cover Classification**, managed and funded by the BLM and Ducks Unlimited. *"The objective of this project was to develop a baseline earth cover inventory using Landsat TM and SPOT XS satellite imagery in geographic information system (GIS) form for the NPR-A. This project will result in a GIS database that can be used for improved natural resources planning, such as monitoring the condition of various wetland communities. These data will also be valuable in modeling the type of habitat that is being used by various wildlife species, such as the threatened Spectacled and Steller's Eiders."* This project covered the entire NPR-A and included a 15 mile buffer outside of its boundary. The project encompasses all three ASRC mitigation banks and provides a dataset that can be applied uniformly across the area. This dataset also covers areas that may be impacted by future development and provides a 1:1 comparison in that case for areas within and around NPR-A.

The results of the project are documented in '**BLM-Alaska Technical Report 40, BLM/AK/ST-02/013+6500+931 dated September 2002**'. (Attachment 5)

The accuracy assessment of this project was 85% over the entire NPR-A for the major classes identified with multiple data training and accuracy assessment sites located within the bank sites. This 30 meter dataset was used to help determine suitability of each bank.

8.3 Upper Colville Bank Mitigation Bank

The Ecological Suitability

The Upper Colville Bank is 80 air miles southwest of Umiat and is at an elevation of approximately 710 feet above sea level. The river at this point is characterized by a single channel with large long deep pools of slow moving water (Figure 8). The area provides critical and unique habitats that support the entire length of the Colville River all the way to the Colville River Delta.

Previous Land Use

The primary use of this area has been for general recreation to include rafting, boating, fishing, and hunting. Aircraft use the wide exposed gravel bars to land. These usages would generally be considered as relatively low frequency and have minimal impact.

There are three exploration oil/gas wells that are plugged and abandoned within a radius of 15 miles from this bank. Two are in NPR-A and drilled in the 1950's and one is on ASRC lands drilled in the 1980's. This area would be considered to be relatively unexplored for oil and gas compared to other areas of the North Slope.

Current and Future Land Use

The current use of the proposed bank properties would be for light recreational, some subsistence uses, and some scientific studies. ASRC as the landowner does not allow for any commercial or private recreational activities for individuals who are not permanent residents of the North Slope or shareholders of ASRC. The exception to this relates to a public easement that runs along the Colville River where ASRC owns the river bed upstream of Umiat. This easement allows the public to access the river for boating, fishing, camping, hiking, and ensuing access to the public lands of NPR-A. This easement does not preclude ASRC from accessing its land for resource development. The required language as stated in the 1984 Stipulation, Agreement and Consent to Entry of the Partial Judgment between the State of Alaska, ASRC, SOHIO Alaska Petroleum Company, and the United States of the public easement is as follows:

“ASRC will reconvey to the United States for the benefit of the public, a recreational easement on and over the bed of the Colville River, including islands, a linear stream-side easement on any lands owned by ASRC between the ordinary high water mark and the highest water mark on the left (looking downstream) or west bank of the Colville River, and a linear stream-side easement over a strip of land running parallel to, and extending 50 feet upland from, the ordinary high

water mark on the east or right bank (looking downstream) of the Colville River for recreational purposes, including, without limitation, boating, fishing, and camping, but expressly excluding hunting.” (Attachment 4)

ASRC recently received conveyance from the BLM of these lands along the Colville River with potential additional acreage to be conveyed. ASRC will be undertaking the process of formally implementing this easement in the near future. (Figure 9) This easement only provides for low impact activities that would have no effect to the surface values of the bank.

Potential Future Land Use and Threats

This bank is formed by a narrow swath of land owned by ASRC that runs along the Colville River. The land directly north of the bank is land held by BLM (NPR-A). This land is open to oil and gas leasing through the BLM lease sale process and was last offered in December of 2011.

The lands directly to the south of the bank are owned by the State of Alaska and are also open for oil and gas leasing as part of the state Foothills Lease Sales. These lands were also last offered in December of 2011.

Current ASRC land policies make all ASRC land available for possible leasing to interested companies. At this time ASRC has large blocks of land leased, but nothing in this area. ASRC will maintain the ability to access the subsurface of this bank from surface lands outside the bank property. (Figure 10)

Over time, as other developments possibly move west, this area could get a new look. If that were the case, this area could see renewed interest, exploration, and possibly even production. These activities could have an impact on the area covered by the Upper Colville River Bank.

This bank is also located adjacent to a 17(b) easement that runs just east of the bank boundary. This easement could be used to travel between NPR-A to the north and the state land to the south over ASRC lands. ASRC would have little control of the usage of these easements, although they do not directly impact the lands within the bank.

While it is hard to identify what development could look like in 25, 50, or 100 years from now, this bank would ensure that this area has a large river corridor protected in perpetuity.

An important point to note about this bank is that ASRC still has about 8,000 acres of selected lands immediately upstream. This offers the future potential and option of increasing the size of this bank dramatically if needed.

Habitats and Plant Communities

Using the **National Petroleum Reserve-Alaska, Earth Cover Classification** data to look at the Upper Colville River Bank shows that this bank is comprised of predominately low and dwarf

shrubs. Within this area it is important to note that there are 47 acres of Carex Aquatillis and 10 acres of Arctophila Fulva. (Table 1) (Figure 11)

BLM Class	Acres
Arctophila Fulva	10
Carex Aquatillis	47
Clear Water	700
Dwarf Shrub	6,912
Flooded Tundra LCP	51
Flooded Tundra NP	135
Low Shrub	1,388
Other	801
Sedge Meadow	365
Sparse Veg	201
Turbid Water	235
Tussock Tundra	379
Wet Tundra	191
Total	11,414

Table 1. Upper Colville River Bank

Using the same dataset for the Colville River Delta shows that many of these same classes exist in that area. This illustrates how this dataset could be used to assess these areas at a 1:1 comparison prior to any impacts.

Fish Resources

According to the State of Alaska Department of Fish and Game Anadromous Waters Catalog, this bank contains some of the only Chum Salmon spawning habitat known on the Colville River. Other fish present in the stretch of river are Pink Salmon, Dolly Varden, and White Fish. (Attachment 6)

Waterfowl, Passerines, and Raptor Resources

While there are no major studies that we are aware of, this area provides habitats that would be used by a variety of migratory waterfowl. This bank is characterized by small lakes, oxbows, ponds, and a slow moving river.

The State of Alaska has identified this bank area as having both duck and goose general distribution along the Colville River, as well as a known migration pattern for geese. These areas were identified in the **North Slope Foothills Areawide Oil and Gas Lease Sales Final Finding of the Director**, dated May 26, 2011. (Figure 12)

According to the National Audubon Society; “The riparian area along the Colville River provides habitat for a variety of passerines; including possibly some of the highest densities in Alaska of

these trans-Beringian migrants - Eastern Yellow Wagtail, Arctic Warbler, and Siberian Bluethroat.”

BLM has identified a number of sensitive raptor nesting sites along the bluffs on the south side of the bank. BLM has provided a copy of this data to ASRC but it is considered to be confidential and is not displayed on the maps. Within this bank there are two identified sites used by raptors for nesting. As far as forage area for raptors, the riparian areas along the rivers, including the gravel bars and shrubs within the river bottoms, are important hunting habitat, as are the lakes, ponds and adjacent tundra.

The U.S. Bureau of Outdoor Recreation river logs from the 1970's describe seeing arctic loons, mergansers, and ducks using this portion of the river.

Wildlife Resources

Moose are currently distributed across the North Slope region, but are concentrated along the riparian habitat of the major rivers flowing from the Brooks Range. Riparian shrub habitats are important for many arctic herbivores, especially in the winter.

Generally moose follow the riparian corridor habitats during the winter. Moose are limited to the use of the riparian habitat in the winter on the North Slope. The largest concentrations of moose are found in the inland portions of the Colville River drainage. (Figure 13)

Brown bears are found throughout this area but in the spring are commonly found along the major river valleys and later move to smaller tributaries. The highest concentrations of bears are found during the fall in berry feeding areas along the Colville River as well as the other larger rivers in the region. (Figure 14)

These areas were identified in the **North Slope Foothills Areawide Oil and Gas Lease Sales Final Finding of the Director**, dated May 26, 2011. (Attachment 7)

Hydrologic Suitability

In terms of the hydrological suitability of this bank, hydrologic input is primarily from the upper Colville River and Awana River. There are no existing water rights in the area; therefore the hydrology of the bank appears sustainable for the foreseeable long-term future.

8.4 Starfish Bluff Mitigation Bank

Ecological Suitability

The Upper Colville Bank is 43 air miles southwest of Umiat and is at an elevation of approximately 515 feet above sea level. The river at this point is characterized by multiple channels and a wide river plain containing numerous oxbows, small lakes, and ponds. (Figure 15) The area provides critical and unique habitats that support the entire length of the Colville River all the way to the Colville River Delta.

Previous Land Use

The primary general use of this area has been for general recreation to include rafting, boating, fishing, and hunting. Aircraft use the wide exposed gravel bars to land. These usages would generally be considered as relatively low.

There are three exploration oil/gas wells they are plugged and abandoned within a radius of 25 miles from this bank. One is in NPR-A and drilled in the 1950's and two are on ASRC lands drilled in the 1980's. Two of these wells had gas accumulations and this area would still be considered to be relatively unexplored compared to other areas of the North Slope.

Current and Future Land Use

The current use of the proposed bank properties would be for light recreational, some subsistence uses, and occasional scientific studies. ASRC as the landowner does not allow for any commercial or private recreational activities for individuals who are not permanent residents of the North Slope or shareholders of ASRC. The exception to this relates to a public easement that runs along the Colville River where ASRC owns the river bed upstream of Umiat. This easement allows the public to access the river for boating, fishing, camping, hiking, and ensuing access to the public lands of NPR-A. This easement does not preclude ASRC from accessing its land for resource development. The required language as stated in the 1984 Stipulation, Agreement and Consent to Entry of the Partial Judgment between the State of Alaska, ASRC, SOHIO Alaska Petroleum Company, and the United States of the public easement is:

“ASRC will reconvey to the United States for the benefit of the public, a recreational easement on and over the bed of the Colville River, including islands, a linear stream-side easement on any lands owned by ASRC between the ordinary high water mark and the highest water mark on the left (looking downstream) or west bank of the Colville River, and a linear stream-side easement over a strip of land running parallel to, and extending 50 feet upland from, the ordinary high water mark on the east or right bank (looking downstream) of the Colville River for recreational purposes, including, without limitation, boating, fishing, and camping, but expressly excluding hunting.”

As ASRC recently received these lands along the Colville River, ASRC will be undertaking the process of formally implementing this easement in the near future. (Figure 16) This easement only provides for low impact activities that would have no effect to the surface values of the bank.

There are current oil and gas leases directly adjacent to the bank on ASRC lands and on BLM lands a few miles to the north and northeast. This demonstrates that there is interest in the area. With future potential project developments, this area could become more attractive for further exploration. (Figure 17)

Potential Future Land Use and Threats

This bank is formed by a swath of land owned by ASRC that runs along the Colville River and to the south. The land directly north of the bank is land held by BLM (NPR-A). This land is open to oil and gas leases through the BLM lease sale process and was last offered in December of 2011.

South of the bank, approximately 7 miles, are lands owned by the State of Alaska and are also open for oil and gas leasing as part of the state Foothills Lease Sales. These lands were also last offered in December of 2011.

The lands to the east and adjacent to the Starfish Bluff Bank are ASRC lands and are currently leased for oil and gas. Current ASRC land policies make all ASRC land available for possible leasing to interested companies. ASRC will maintain the ability to access the subsurface of this bank from surface lands outside the bank property.

The companies that hold the leases near the bank property could decide to conduct exploration programs to further assess these lands. This would increase activity near the bank during this process and possibly lead to production from adjacent lands.

Over time as other developments possibly move west, such as Chukchi Sea development, the Road to Umiat, or the Alaska Gas Pipeline, this area could get a new look. If that were the case, this area could see renewed interest, exploration, and possibly even production. This could have impacts on the properties covered by the Starfish Bluff Bank.

This bank is also located adjacent to a 17(b) trail easement that runs just south of the bank boundary and could be used to travel between NPR-A and a 17(b) airstrip easement that allows for a 7,000 airstrip on ASRC lands. ASRC would have little control of the usage of these easements although they do not directly impact the lands within the bank.

While it is hard to identify what development could look like in 25, 50, or 100 years from now, this bank would ensure that this area has a large river corridor protected in perpetuity.

Habitats and Plant Communities

Using the **National Petroleum Reserve-Alaska, Earth Cover Classification** data to look at the Starfish Bluff Bank shows that this bank’s vegetation is comprised of predominately low, dwarf, and tall shrubs. Within this area it is important to note that there are 78 acres of Carex Aquatillis and 39 acres of Arctophila Fulva. (Table 2) (Figure 18)

BLM Class	Acres
Arctophila Fulva	39
Carex Aquatillis	78
Clear Water	571
Dwarf Shrub	2,813
Flooded Tundra LCP	40
Flooded Tundra NP	155
Low Shrub	1,493
Other	2,216
Sedge Meadow	268
Sparse Veg	580
Turbid Water	497
Tussock Tundra	102
Wet Tundra	233
Tall Shrub	1,412
Total	10,787

Table 2. Starfish Bluff Bank

Using the same dataset for the Colville River Delta shows that many of these same classes exist in that area. This illustrates how this dataset could be used to assess these areas at a 1:1 comparison prior to any impacts.

Fish Resources

According to the State of Alaska Department of Fish and Game Anadromous Waters Catalog, this bank contains Chum Salmon, Pink Salmon, Dolly Varden, and White Fish. (Attachment 6)

Waterfowl, Passerines, and Raptor Resources

While there are no major studies that we are aware of, this area provides habitats that would be used by a variety of migratory waterfowl. The State of Alaska has identified this bank area as having both duck and goose general distribution along the Colville River. These areas were identified in the **North Slope Foothills Areawide Oil and Gas Lease Sales Final Finding of the Director**, dated May 26, 2011. (Figure 12)

According to the National Audubon Society; “The riparian area along the Colville River provides habitat for a variety of passerines; including possibly some of the highest densities in Alaska of these trans-Beringian migrants - Eastern Yellow Wagtail, Arctic Warbler, and Siberian Bluethroat.”

BLM has identified a number of sensitive raptor nesting sites along the bluffs on the south side of the bank. BLM has provided a copy of this data to ASRC but it is considered to be confidential and is not displayed on the maps. Within this bank there are two identified sites used by raptors for nesting. As far as forage area for raptors, the riparian areas along the rivers, including the gravel bars and shrubs within the river bottoms, are important hunting habitat, as are the lakes and ponds and adjacent tundra.

Wildlife Resources

Moose are currently distributed across the North Slope region, but are concentrated along the riparian habitat of the major rivers flowing from the Brooks Range. Riparian shrub habitats are important for many arctic herbivores, especially in the winter.

Generally moose follow the riparian corridor habitats during the winter. Moose are limited to the use of the riparian habitat in the winter on the North Slope. The largest concentrations of moose are found in the inland portions of the Colville River drainage. (Figure 13)

Brown bears are found throughout this area but in the spring are commonly found along the major river valleys and later move to smaller tributaries. The highest concentrations of bears are found during the fall in berry feeding areas along the Colville River as well as the other larger rivers in the area. (Figure 14)

These areas were identified in the **North Slope Foothills Areawide Oil and Gas Lease Sales Final Finding of the Director**, dated May 26, 2011. (Attachment 7)

Hydrologic Suitability

In terms of the hydrological suitability of this bank, hydrologic input is primarily from the upper Colville River and Killik River. There are no existing water rights in the area; therefore the hydrology of the bank appears sustainable for the foreseeable long-term future.

8.5 Cape Halkett Mitigation Bank

Ecological Suitability

The Cape Halkett bank is located on the Beaufort Sea Coast 35 air miles from the Village of Nuiqsut. This bank provides breeding habitat for numerous species of water birds as well as breeding range habitat for the threatened spectacled and steller's eiders. The bank properties are also identified as critical habitat for polar bears by designation of the U.S. Fish & Wildlife Service.

Previous Land Use

Cape Halkett has been used by the U.S. Coast Guard for a communication tower site since the 1970's. In 1982 Cape Halkett was the location of the Livehorse Well drill site. ASRC had leased the acreage at Cape Halkett from 1982-87. The area offshore has been leased on and off for many years for both state and federal leases.

Current and Future Land Use

The Coast Guard has removed the tower and will not use this site in the future. The Cape Halkett area has been used for scientific research occasionally; otherwise there is no known current usage.

Potential Future Land Use and Threats

There are currently State of Alaska offshore leases located about 5 miles south of the proposed bank location. Immediately to the west of the bank in NPR-A are BLM lease tracts currently deferred from leasing but could be offered at a later date. (Figure 20)

Current ASRC land policies make all ASRC land available for possible leasing to interested companies. At this time ASRC has large blocks of land leased, but nothing near this site. ASRC will maintain the ability to access the subsurface of this bank from surface lands outside the bank property.

ASRC lands at Cape Halkett are the only privately held lands in the area. If any nearby offshore acreage was developed, the lands at Cape Halkett could possibly be used for shore-based support facilities.

Erosion is an issue affecting some of the coastal areas on and near this proposed bank. The northwest corner of the bank would be most impacted by these forces. While the east and southern area of the property has far less impact. In fact, the eastern portion at the cape is actually increasing in size with the sizeable addition of a large spit.

Habitats and Plant Communities

Using the **National Petroleum Reserve-Alaska, Earth Cover Classification** data to look at the Cape Halkett Bank shows that this bank's vegetation is comprised of predominately Sedge

Meadow, Carex Aquatillis, and Flooded Tundra LCP. Within this area it is important to note that there is 723 acres of Carex Auatillis and 8 acres of Arctofphila Fulva. (Table 3) (Figure 21)

BLM Class	Acres
Arctophila Fulva	8
Carex Aquatillis	723
Dwarf Shrub	3
Flooded Tundra LCP	446
Flooded Tundra NP	271
Moss Lichen	90
Sedge Meadow	1,273
Sparse Veg	1
Tussock Tundra	22
Wet Tundra	682
Total	3,519
*Water Acreage is not shown	

Table 3. Cape Halkett Bank

Using the same dataset for the Colville River Delta shows that many of these same classes exist in that area. This illustrates how this dataset could be used to assess these areas at a 1:1 comparison prior to any impacts.

Fish Resources

No known fish species are present in the bank.

Waterfowl

As part of the **Northeast National Petroleum Reserve-Alaska, Supplemental Integrated Activity Plan Record of Decision**, dated July 2008, the lakes on the Cape Halkett property were designated as lakes used by geese. In addition, this area is also identified as a goose molting area. (Figure 22) Cape Halkett also falls within the Stellar’s and Spectacled Eider breeding ranges as designated by the U.S. Fish & Wildlife Service. Both of these Eider species are currently listed as ‘threatened’.

Wildlife Resources

The Cape Halkett area was designated as Polar Bear denning habitat by the U.S. Fish and Wildlife Service in 2010 as part of the ‘threatened’ species listing.

The lands adjacent to Cape Halkett were designated as the Teshekpuk Lake Caribou Use Area as part of the **BLM Northeast National Petroleum Reserve-Alaska, Supplemental Integrated Activity Plan Record of Decision**. (Figure 23)

Hydrological Suitability

In terms of the hydrological suitability of this bank, hydrologic input is primarily from general precipitation. There are no existing water rights in the area; therefore the hydrology of the bank appears sustainable for the foreseeable long-term future.

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11 List of Attachments

- Attachment 1: Upper Colville Patents and Master Title Plats
- Attachment 2: Starfish Bluff Bank Patents and Master Title Plats
- Attachment 3: Cape Halkett Interim Conveyance and Master Title Plats
- Attachment 4: 1984 Stipulation, Agreement and Consent to Entry of the Partial Judgment between the State of Alaska, ASRC, SOHIO Alaska Petroleum Company, and the United States and Quitclaim Deed No. 1223
- Attachment 5: BLM and Ducks Unlimited, National Petroleum Reserve-Alaska, Earth Cover Classification Project Documentation
- Attachment 6: State of Alaska Anadromous Waters Catalog Maps, Ikpikuk River A-1, A-2, A-4, A-5
- Attachment 7: State of Alaska Department of Natural Resources, Division of Oil & Gas, North Slope Foothills Areawide Oil and Gas Lease Sales, Final Finding of the Director, May 26, 2011