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DRAFT

Umbrella Mitigation Banking Instrument
for the
HLB Mitigation Bank

Sponsor

Heritage Land Bank
Real Estate Department
Municipality of Anchorage, Alaska

Submittal Date: April 24, 2019

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**Umbrella Mitigation Banking Instrument
for the
HLB Mitigation Bank**

Preface

This Umbrella Mitigation Banking Instrument (Instrument) provides approval of the HLB Mitigation Bank (Bank) sponsored by the Municipality of Anchorage's real estate department, the Heritage Land Bank (HLB).

Approval of this instrument constitutes the regulatory approval required for the Bank to be used to provide compensatory mitigation for Department of the Army permits pursuant to 33 C.F. R. 332.8(a)(1). This instrument is not a contract between the Sponsor or Property Owner and Corps or any other agency of the federal government. Any dispute arising under this instrument will not give rise to any claim by the Sponsor or Property Owner for monetary damages. This provision is controlling notwithstanding any other provision or statement in the Instrument to the contrary.

I. Preamble

A. Purpose and Need

Whereas, the purpose of the Bank is to provide compensatory mitigation for unavoidable impacts to waters of the United States authorized through the issuance of Department of the Army (DA) permits pursuant to section 404 of the Clean Water Act (33 U.S.C. 1344) and/or sections 9 or 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403). Compensatory mitigation means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Whereas, the Sponsor of the Bank is Heritage Land Bank (HLB), the real estate department of the Municipality of Anchorage, which is the fourth largest city by area in the U. S. with 1,706 square miles of land. HLB is a major land owner and manages approximately 10,000 acres of land in the municipality. The HLB lands support an abundance of aquatic resources including streams, lakes, wetlands, and riparian forests, many that remain undeveloped and provide important ecological functions in their watersheds.

Whereas, the important aquatic resources in the watersheds of Anchorage include the habitats of the five species of Pacific salmon that provide important commercial, subsistence and recreational value to the region and the state. Salmon are also an essential prey species for the endangered population of the beluga whale that inhabits the waters of upper Cook Inlet, a major estuary in the region. The streams and rivers in Anchorage have robust ecological connections with the adjacent natural habitats within their watersheds including wetlands and riparian uplands.

Whereas, Anchorage is the state's population center and the location of major industrial, commercial, and infrastructure development activity. Anchorage is the center of transportation in the state, with the Seward and Glenn Highways, the Alaska Railroad, the Port of Alaska, and the Ted Stevens Anchorage International Airport located in the municipality. Expansion of the transportation infrastructure along with commercial and residential growth in Anchorage has occurred in the past with increasing demand, which is expected to continue into the future.

Whereas, aquatic resources are limited and have diminished over time throughout Anchorage and the Sponsor has identified a need for restoration and preservation of important aquatic resources as the expected future development activity may result in unavoidable impacts to aquatic resources. Using a watershed approach, the Sponsor has selected the Rabbit Creek watershed (12-digit HUC) in south Anchorage as a priority for restoration and preservation of aquatic resources.

Whereas, the Sponsor's property located in the Rabbit Creek Watershed referred to as the Section 36 Mitigation Site includes approximately 230 acres of natural habitats including freshwater streams, wetlands and riparian forests located in the headwaters of Little Rabbit Creek and the rapidly-growing Hillside District of south Anchorage. Tributary streams of Rabbit Creek discharge from and flow across the wetlands in the Section 36 Mitigation Site, which provides aquatic ecological functions including regulation of stormwater flows, trapping suspended sediment, and maintaining the quality of water supplying downstream habitats that support salmon and other aquatic species. The wetlands and adjacent upland habitats at the Site support wildlife including large mammals such as bear and moose, and the area is valued by the local community for open space and recreation.

B. Objectives

Whereas, the overall goal of the Bank is to complete aquatic resource mitigation within the municipal boundaries of Anchorage using a watershed approach to prioritize and select specific mitigation sites and projects, including restoration, enhancement, and/or preservation.

Whereas, the Sponsor has selected a mitigation site and project to include in the Bank using a watershed approach, the Section 36 Mitigation Site. The mitigation objectives for the Section 36 Mitigation Site include:

1. Preserve and protect the aquatic resources on the Section 36 Mitigation Site including springs, streams, wetlands, and upland buffers;
2. Where practicable, restore natural wetlands and streams on the Section 36 Mitigation Site that are impacted by fill placement, water diversion, off-road vehicle traffic, or other impacts. (Potential restoration projects would require technical evaluation, mitigation plan development, and an approved Instrument modification).

These mitigation objectives establish the basis for the mitigation plan for the Section 36 Mitigation Site.

C. Bank Type

Whereas, the Bank will be a commercial type mitigation bank, producing mitigation credits that may be used by the Sponsor or transferred to permittees seeking mitigation credits within the approved service area.

D. Approval

Whereas, this Instrument is effective upon the latter date of signature by the Sponsor and the Corps.

E. Interagency Review Team

The IRT is the group of Federal, State, and Local agencies that has reviewed and will advise the Chair regarding, the establishment and management of the Bank pursuant to the provisions of the Instrument. The Corps serves as Chair of the IRT and the following agencies serve on the IRT:

- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- Natural Resource Conservation Service
- Alaska Department of Natural Resources
- Alaska Department of Fish and Game
- Municipality of Anchorage

F. Exhibits

Whereas, the following exhibits are incorporated by reference to this Instrument:

Exhibit A- Mitigation Plan

Exhibit-B. Title Report

Exhibit-C. Sample Property Protection Instrument

Exhibit-D. Sample Credit Receipt & Ledger

Exhibit-E. Boundary Sign Example

G. Disclaimer

Whereas, this Instrument does not in any manner affect statutory authorities and/or responsibilities of the signatory parties.

NOW, THEREFORE, the Parties agree to the following:

II. Relevant Authorities and Guidance

The establishment, use, operation and maintenance of the Bank will be carried out in accordance with the following authorities, regulations, and guidance:

Federal:

- Clean Water Act (33 USC 1251 et seq.);
- Rivers and Harbors Act (33 USC 403);
- Fish and Wildlife Coordination Act (16 USC 661 et seq.);
- Endangered Species Act (16 USC 1531 et. seq.);
- Magnuson Stevens Fishery Conservation and Management Act (16 USC 1801 et. seq.);
- Regulatory Programs of the Corps of Engineers (33 CFR Parts 320-330);

- Guidelines for Specification of Disposal Sites for Dredged and Fill Material (40 CFR Part 230);
- Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army concerning the Determination of Mitigation Under Clean Water Act, Section 404 (b)(1) Guidelines (February 6, 1990);
- Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Part 332);
- Regulatory Guidance Letter 08-03. Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources;
- Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency Concerning Mitigation Sequence for Wetlands in Alaska Under Section 404 of the Clean Water Act (15 June 2018);
- Regulatory Guidance Letter 18-01. Determination of Compensatory Mitigation Credits for the Removal of Obsolete Dams and Other Structures from Rivers and Streams (25 September 2018).

State:

- Alaska Land Act, Alaska Stat. Sec. 38.05.070-075

Borough/Local:

- Anchorage Municipal Code, Title 21 Land Use Planning; and
- Anchorage Municipal Code, Title 25 Public Lands.

III. Establishment of the Bank

A. Site Selection §332.3(d)

The selection of the Section 36 Mitigation Site for the Bank was made based on ecologically suitable for providing the desired aquatic resource functions. In determining the ecological suitability of the compensatory mitigation based on:

- Hydrological conditions
- Watershed-scale features, such as aquatic habitat diversity, habitat connectivity
- The size and location of the compensatory mitigation site relative to hydrologic sources
- Compatibility with adjacent land uses and watershed management plans
- Reasonably foreseeable effects
- Other relevant factors - development trends, anticipated land use changes, habitat status and trends, the relative locations, water quality goals,

The Section 36 Mitigation Site is located in the Rabbit Creek-Frontal Turnagain Arm watershed (HUC 1902040107) and the Anchorage sub-basin (HUC 19020401). The site is described in the Mitigation Plan for Section 36 Mitigation Site, attached as Exhibit A of this Instrument.

Additional mitigation sites may be proposed for addition to the Bank in accordance with 33 CFR 332.8(h). The Sponsor shall submit a written request for an instrument modification to include the additional site(s). This request shall include:

1. Property ownership information that identifies if the Sponsor owns the land fee simple or an interest in the land (easement, etc.);
2. Title Report/Title Insurance information that identifies any known encumbrances on the land (mortgages, liens, rights-of-way, servitudes, easements, etc.);
3. A mitigation plan that includes all information identified at 33 CFR 332.4(c)(2-14);
4. A credit release schedule tied to the achievements of specific milestones;
5. A narrative that describes and a map that illustrates the geographic Service Area; and
6. Any additional information required by the district engineer.

The approval of the Section 36 Mitigation Site does not provide approval of long term management, site protection, or long term management funding for any additional sites. Each additional site will require independent review of the entire compensatory mitigation plan to include the above mentioned items.

B. Sponsor's Scope of Work

The Sponsor agrees to perform all necessary work, in accordance with the provisions of this Instrument and as described in the mitigation plan for each mitigation site, until the Sponsor demonstrates to the satisfaction of the Corps, considering the advice of the IRT, that the mitigation site complies with all provisions contained herein.

1. **Maintenance Provision:** Following achievement of the performance standards, the Sponsor agrees to perform all necessary work to maintain those standards as prescribed in the Long-Term Management Plan for each mitigation site.
2. **Monitoring Provision:** The Sponsor agrees to perform all necessary work, pursuant to the approved mitigation plan, to monitor the Bank during the establishment and operation phases to demonstrate compliance with the performance standards as prescribed in the Long-Term Management Plan for each mitigation site.

C. Permits

The Sponsor will obtain all appropriate permits or other authorizations needed to establish and maintain mitigation sites within the Bank. This Instrument does not fulfill or substitute for such authorization(s).

D. Access

Upon reasonable prior notice, the Sponsor will allow, or otherwise provide for, access to the Bank mitigation sites by the Corps, the IRT, or their agents or designees, and the Long-Term Steward, as reasonably necessary, for the purpose of inspection, compliance monitoring, and remediation consistent with the terms and conditions of this Instrument, Mitigation Plans and Long-Term Management Plans. Inspecting parties shall not unreasonably disrupt or disturb activities on the property.

IV. Operation of the Bank

A. Service Area §332.8(d)(6)(ii)(A)

The availability of credits from each Bank mitigation site is limited to the authorized service area that is specific to each site. The service area for a mitigation site is the watershed, ecoregion, physiographic province, and/or other geographic area the Bank mitigation site is authorized to provide compensatory mitigation. A proposed geographic service area for each mitigation site will be identified within the mitigation plan. The service area will be appropriately sized to ensure that the aquatic resources provided will effectively compensate for unavoidable adverse environmental impacts across the entire service area.

Delineation of the service area does also consider any locally-developed standards and criteria that may be applicable, such as local watershed plans and community district plans. The economic viability of the Bank mitigation site will be considered in determining the size of the proposed service area.

B. Accounting Procedures §332.8(d)(6)(ii)(B)

The Bank credit transactions will take place according to the following the general procedure:

1. A permittee will approach the Sponsor with the number and type of credits required to compensate for unavoidable losses of aquatic resources prior to sale of credits;
2. the Sponsor will inform the permittee of credit availability at this mitigation site;
3. if the required credits are available, the permittee will proceed to purchase the credit(s) from the Sponsor;
4. the permittee and the Sponsor sign a credit receipt, which will be submitted to the Corps as proof of the credit transaction and documentation that the liability for compensatory mitigation is transferred from the permittee to the Sponsor;
5. each credit purchase transaction will be formally documented with the signed credit receipt and entry into the credit ledger; the Corps enters the data into RIBITS.

The Sponsor will assume legal responsibility for providing compensatory mitigation once the permittee purchases credits from the Bank.

The sponsor shall compile an annual ledger report showing the beginning and ending balance of available credits and permitted impacts for each resource type, all additions and subtractions of credits, service area where impacts occurred, and any other changes in credit availability (e.g., additional credits released, credit sales suspended). The ledger report must be submitted to the district engineer by January 31st and document all Bank mitigation site transactions for the previous calendar year, with a cumulative tabulation of all transactions to date until the last credit is sold, at which time a final credit ledger shall be submitted. A sample Credit Ledger and Credit Receipt for the Bank is provided in Exhibit D. The ledger report is part of the administrative record for the mitigation bank. The district engineer will make the ledger report available to the public upon request.

The Sponsor will also provide an annual account of the long-term stewardship funding status in compliance with the established credit release schedule for each mitigation site to the Corps by January 31st of the following year.

C. Responsible Party §332.8(d)(6)(ii)(C)

The sponsor maintains the legal responsibility for providing compensatory mitigation once the permittee secures the credits from the sponsor. Each credit purchase transaction will be formally documented with a signed credit receipt and in the credit ledger.

D. Default and Closure Provisions §332.8(d)(6)(ii)(D)

1. Default

Default and closure provisions may apply to the umbrella mitigation bank or to a Bank specific mitigation site. Default of the instrument can include the failure to meet performance standards, the failure to submit monitoring reports, the failure to maintain annual and/or individual project ledgers, the failure to report approved credit transactions, and the failure to comply with other terms of the instrument. In the cases of noncompliance and/or default, the mitigation rule defines the authority of the District Engineer (DE) to direct actions as below:

- The DE can suspend credit sales for the Bank as a whole;
- The DE can suspend credit sales within a service area;
- The DE can suspend credits for a mitigation site;
- The DE can decrease available credits at a mitigation site;
- The DE can terminate the entire Bank instrument;
- The DE can require/direct adaptive management actions at a mitigation site;
- The DE can modify the credit release schedule for a Bank or a specific mitigation site; and/or
- The DE can refer non-compliance actions to Department of Justice if the sponsor does not comply with DE directives.

2. Force Majeure

Force majeure events include natural or human-caused catastrophic events. If the Sponsor asserts a mitigation site has sustained significant adverse impacts due to an event which may be determined to be a force majeure, the Sponsor shall give written notice with supporting evidence to the Corps as soon as is reasonably practicable. The Corps retains sole discretion over the final determination of whether an event constitutes a force majeure, whether significant adverse impacts to the Bank site have occurred, and to what extent changes to the Bank site will be permitted. The consequences of any events of force majeure shall not affect the status of previously released credits, sold, used, or transferred.

3. Termination and Transfer of the Instrument

This Instrument may be terminated by the Sponsor prior to incurring any mitigation obligations (no credit sales) or if all mitigation obligations are met to the satisfaction of the Corps. Any transfer or assignment of any portion of or interest in the Bank shall be subject to the requirement that the successor assumes all obligations pursuant to this Instrument and has sufficient financial capacity to carry out those obligations. Transfer or assignment of this Instrument shall also be subject to the requirement that any funds pledged toward the long-term management fund shall continue to be

accrued and expended in a manner consistent and in accordance with this Instrument and the Long Term Management Plan.

4. Bank Mitigation Site Closure

The Corps shall issue a written “Mitigation Site Closure Certification” to the Sponsor upon meeting all the requirements for the mitigation site:

- The performance standards are satisfied, and all applicable success criteria are achieved;
- The released credits are debited from the credit ledger;
- The real estate protection measures are in place;
- The Long-Term Management Plan is approved by the Corps and implemented;
- Where applicable, the Long-Term Stewardship Fund is fully funded;
- All requirements of the Instrument and the Mitigation Plan are satisfied.

Any remaining requirement for financial assurances for Bank site establishment (i.e., construction) will cease upon site closure. A mitigation site can be closed upon withdrawal of all credits and independently of other Bank mitigation sites included in the Instrument.

E. Reporting Protocols §332.8(d)(6)(ii)(E)

The Sponsor shall be responsible for all credit ledger reporting as outlined in the Accounting Procedures section. The reports will include information related to all disbursements for long-term stewardship fund, interest earned by the long-term stewardship fund for each service area account, all credit transactions for permits accepted for each service area, DA permit number and state permit number, service area where impacts occurred, amount of authorized impacts, amount of required compensatory mitigation, balance of released and transferred credits at the end of the reporting period, and other information as deemed necessary by the Corps.

The Sponsor will also be responsible for conducting annual monitoring of the mitigation site and reporting as described in the mitigation plan for each site.

F. Other Information §332.8(d)(6)(ii)(F)

The sponsor shall make readily available any other information deemed necessary by the district engineer.

V. Mitigation Plans §332.8(d)(6)(iii)(A)

The sponsor shall prepare and submit to the Corps for review a mitigation plan for each mitigation site proposed for the Bank. Mitigation plans shall include all applicable items listed in 33 CFR 332.4(c)(2) through (14).

VI. Credit Release Schedule §332.8(d)(6)(iii)(B)

The release of credits from each Bank mitigation site shall be based on the achievement of ecological performance standards. Preservation and protection actions taken to secure the ecological baseline conditions are included in performance standards. Actions taken to achieve performance standards

may be organized into groups that represent milestones that advance the establishment of each mitigation site and reflect the mitigation plan.

All credit releases require prior approval by the Corps, in consultation with the IRT, based on a determination that required milestones have been achieved. The Corps, in consultation with the IRT, may modify the credit release schedule, including reducing the number of available credits or suspending credit sales or transfers, where necessary to ensure that all credit sales or transfers remain tied to compensatory mitigation projects with a high likelihood of meeting performance standards.

The credit release schedule for each Bank mitigation site shall be described in the mitigation plan for each site.

VII. Definitions

(All definitions are from 33 CFR § 332.2)

Adaptive management means the development of a management strategy that anticipates likely challenges associated with compensatory mitigation projects and provides for the implementation of actions to address those challenges, as well as unforeseen changes to those projects. It requires consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and guides modification of those projects to optimize performance. It includes the selection of appropriate measures that will ensure that the aquatic resource functions are provided and involves analysis of monitoring results to identify potential problems of a compensatory mitigation project and the identification and implementation of measures to rectify those problems.

Buffer means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

Compensatory mitigation means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Compensatory mitigation project means compensatory mitigation implemented by the permittee as a requirement of a DA permit (i.e., permittee-responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Condition means the relative ability of an aquatic resource to support and maintain a community of organisms having a species composition, diversity, and functional organization comparable to reference aquatic resources in the region.

Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic functions is based on the resources restored, established, enhanced, or preserved.

DA means Department of the Army.

Days means calendar days.

Debit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the loss of aquatic functions at an impact or project site. The measure of aquatic functions is based on the resources impacted by the authorized activity.

Enhancement means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation) means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area and functions.

Functional capacity means the degree to which an area of aquatic resource performs a specific function.

Functions means the physical, chemical, and biological processes that occur in ecosystems.

Impact means adverse effect.

In-kind means a resource of a similar structural and functional type to the impacted resource.

Interagency Review Team (IRT) means an interagency group of federal, tribal, state, and/or local regulatory and resource agency representatives that reviews documentation for, and advises the district engineer on, the establishment and management of a mitigation bank or an in-lieu fee program.

Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by DA permits. In general, a mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are governed by a mitigation banking instrument.

Mitigation banking instrument means the legal document for the establishment, operation, and use of a mitigation bank.

Permittee-responsible mitigation means an aquatic resource restoration, establishment, enhancement, and/or preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility.

Preservation means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Reference aquatic resources are a set of aquatic resources that represent the full range of variability exhibited by a regional class of aquatic resources as a result of natural processes and anthropogenic disturbances.

Rehabilitation means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/ historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Release of credits means a determination by the district engineer, in consultation with the IRT, that credits associated with an approved mitigation plan are available for sale or transfer, or in the case of an in-lieu fee program, for fulfillment of advance credit sales. A proportion of projected credits for a specific mitigation bank or in-lieu fee project may be released upon approval of the mitigation plan, with additional credits released as milestones specified in the credit release schedule are achieved.

Restoration means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: reestablishment and rehabilitation.

Riparian areas are lands adjacent to streams, rivers, lakes, and estuarine marine shorelines. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. Service area means the geographic area within which impacts can be mitigated at a specific mitigation bank or an in-lieu fee program, as designated in its instrument.

Services mean the benefits that human populations receive from functions that occur in ecosystems.

Sponsor means any public or private entity responsible for establishing, and in most circumstances, operating a mitigation bank or in-lieu fee program.

Standard permit means a standard, individual permit issued under the authority of section 404 of the Clean Water Act and/or sections 9 or 10 of the Rivers and Harbors Act of 1899.

Temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Higher compensation ratios may be required to compensate for temporal loss. When the compensatory mitigation project is initiated prior to, or concurrent with, the permitted impacts, the district engineer may determine that compensation for temporal loss is not necessary, unless the resource has a long development time.

Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

Watershed approach means an analytical process for making compensatory mitigation decisions that support the sustainability or improvement of aquatic resources in a watershed. It involves consideration of watershed needs, and how locations and types of compensatory mitigation projects address those needs. A landscape perspective is used to identify the types and locations of compensatory mitigation projects that will benefit the watershed and offset losses of aquatic resource functions and services caused by activities authorized by DA permits. The watershed approach may involve consideration of landscape scale, historic and potential aquatic resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial

connections between aquatic resources when determining compensatory mitigation requirements for DA permits.

Watershed plan means a plan developed by federal, tribal, state, and/ or local government agencies or appropriate non-governmental organizations, in consultation with relevant stakeholders, for the specific goal of aquatic resource restoration, establishment, enhancement, and preservation. A watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder interests, and land uses. Watershed plans may also identify priority sites for aquatic resource restoration and protection. Examples of watershed plans include special area management plans, advance identification programs, and wetland management plans.

VIII. Other Provisions

A. Dispute Resolution

Resolution of disputes regarding development or modification of this Instrument shall be in accordance with the Department of the Army and Environmental Protection Agency regulations entitled "Compensatory Mitigation for Aquatic Resources" (33 CFR 332.8 (e)), as well as any other applicable federal or state regulations governing mitigation bank operation.

B. Notice

Any notice required or permitted hereunder shall be deemed to have been given either (i) when delivered by hand, or (ii) three (3) days following the date deposited in the United States mail, postage prepaid, by registered or certified mail, return receipt requested, or (iii) sent by FedEx or similar next day nationwide delivery system, addressed as follows:

Real Estate Department
Heritage Land Bank
P.O. Box 196650 Anchorage, AK 99519-6650

U.S. Army Corps of Engineers-Alaska District Regulatory Division
P.O. Box 6898
JBER, Alaska 99506-0898

C. Voids/Modifications

This Instrument, including exhibits, may only be amended or modified with the written approval of the Corps in consultation with the IRT and the Bank Sponsor. In the event the Sponsor determines that modifications must be made in the Instrument or Mitigation Plan to ensure successful establishment and operation of the Bank or the mitigation site the Sponsor shall submit a written request for such modification to the Corps, for written approval. The Sponsor must notify the Corps with at least 60 days in advance before any action is taken to void or modify the Instrument, mitigation plan, long-term management plan, or long-term protection mechanisms, including transfer of title to, or establishment of any other legal claims over, the Bank. The Site Protection Instrument, management plan or long-term protection mechanism MAY NOT be altered, amended, modified, vacated or terminated in whole or in part in any way without the express written approval of the Corps, in consultation with the IRT. Any modifications to the Instrument or Mitigation Plan will comply with Corps regulations at 33 CFR 332.8(g).

D. Invalid Provisions

In the event any one or more of the provisions contained in this Instrument are held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability will not affect any other provisions hereof, and this Instrument shall be construed as if such invalid, illegal or unenforceable provision had not been contained herein.

E. No Liability of Regulatory Agencies

The responsibility for financial success and risk to the investment initiated by the Sponsor rests solely with the Sponsor. The regulatory agencies that are parties to this Instrument administer their respective regulatory programs and make no guarantee of the financial success of mitigation banks, specific individuals, or entities. Accordingly, there is no guarantee of profitability for any individual mitigation bank. Because the regulatory agencies do not control the number of mitigation banks proposed nor the resulting market impacts upon success or failure of individual banks, market studies of the potential and future demand for bank credits are the sole responsibility of the Sponsor. The Sponsor should not construe this Instrument as a guarantee in any way that the Agencies will ensure sales of Credits from this Bank or that the Agencies will forgo other mitigation options that may also serve the public interest.

F. Grant Program Participation

State and Federal funds designated for voluntary restoration projects shall not be used to generate mitigation credits sold for profit.

G. Sale of Bank Property or Conveyance of Property Interests

The Sponsor shall not transfer title or otherwise convey interests in the Property without 60-day prior notice and written approval by the Corps.

HLB MITIGATION BANK

IN WITNESS WHEREOF, the parties hereto have executed this Instrument on the date herein below last written by the Corps.

Sponsor

Date

Corps of Engineers

Date

Exhibit A

Mitigation Plan for the Section 36 Mitigation Site

POA-2009-0874

DRAFT

Mitigation Plan

for the

Section 36 Mitigation Site

HLB Mitigation Bank

Sponsor

Heritage Land Bank
Real Estate Department
Municipality of Anchorage, Alaska

Submittal Date: April 24, 2019

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Preface

This document presents the mitigation plan for the Section 36 Mitigation Site (S36 Site), a property within the HLB Mitigation Bank sponsored by Heritage Land Bank, the real estate department of the Municipality of Anchorage, Alaska. The S36 Site includes MOA Parcels 01713105000 and 01713106000, located in section 36, T12N, R3W, SM; coordinates are N61.08° W149.74° (NAD83); and, the location is in the USGS Topo Anchorage A-8(NW) map. The site includes approximately 230 acres of natural habitats including freshwater streams, wetlands and riparian forests located in the headwaters of Little Rabbit Creek, a tributary of Turnagain Arm in upper Cook Inlet (Figures 1 and Figure 2). The location is more than 1,000-feet elevation above sea level in a subalpine valley in south Anchorage (Figure 3).

1 Service Area §332.8(d)(6)(ii)(A)

The Service Area for the S36 Site is delineated by the Anchorage sub-basin (8-digit HUC) within the limits of the Municipality of Anchorage (Figure 4). A listing of the watersheds contained within the Service Area is presented in Table 1.

The Service Area is the geographic area where credits produced by the S36 Site are authorized to provide compensatory mitigation under the terms of the approved Bank Instrument. The S36 Site Service Area is drawn in consideration of shared aquatic habitats or resources that together form an ecological unit. The shared aquatic habitat within the S36 Site Service Area is the assemblage of wetlands, streams and rivers that drain into the estuary of upper Cook Inlet delineated by the watershed boundaries of the Anchorage sub-basin 8-digit hydrologic unit code (HUC). The shared aquatic resources that function across the Service Area includes the five species of Pacific salmon that are important for subsistence, commercial, and recreational fisheries in the region; the Cook Inlet population of the beluga whale and its Critical Habitat area; and the other freshwater and estuarine-dwelling aquatic organisms that are part of the food chain for salmon and other aquatic organisms and terrestrial wildlife. The streams, wetlands, and other aquatic resources in the Service Area are described in the Anchorage Wetlands Management Plan (MOA, 2014a). The Service Area is within a single ecological unit, the Cook Inlet Ecoregion with a mild maritime climate, similar terrain, and related vegetation communities (Gallant et al., 1995).

Economic considerations dictate that due to the pattern of dispersed and unpredictable development activity within the Cook Inlet region, a service area that is based on a single, 10-digit HUC watershed boundary alone are not economically viable for the Bank and consideration of other criteria, such as ecological similarities as defined in ecoregion boundaries and/or local governmental authorities are necessary in identifying an appropriate-sized service area.

The S36 Site is located within the Anchorage sub-basin (8-digit HUC), which is a mostly a rural region except for the core area of the Municipality of Anchorage. Many of the Anchorage sub-basin watersheds extend deep into higher-elevation mountainous regions of the Chugach Range that are in different climatic and ecological zones than the S36 Site with different types of wetland habitats and mitigation requirements. Also, much of the area is within a protected conservation unit (Chugach State Park) and is unlikely to generate mitigation debits.

The use of credit within the Service Area is also limited to freshwater habitats only and the estuarine waters of Turnagain Arm and Knik Arm are excluded. The resulting area of the actual Service Area is reduced substantially from the entire 10-digit HUC of the Rabbit Creek-Frontal Cook Inlet watershed (HUC10) where the S36 Site is located.

Table 1. Service Area Watersheds for the Section 36 Mitigation Site

Watersheds and Hydrologic Units (12-Digit HUC Code) ^a	Municipality ^c
Knik Arm Basin	
Anchorage Sub-Basin (8-Digit HUC)	
Campbell Creek Watershed (10-Digit HUC)	
190204010601 South Fork Campbell Creek	MOA
190204010602 South Fork Little Campbell Creek	MOA
190204010603 North Fork Campbell Creek	MOA
City of Anchorage-Frontal Cook Inlet Watershed (10-Digit HUC) ^d	
190204010804 Fire Creek	MOA
190204010806 Chester Creek	MOA
190204010808 Knik Arm-Frontal Cook Inlet ^d	MOA ^d
Eagle River Watershed (10-Digit HUC)	
190204010306 Lower Eagle River	MOA
Eklutna River Watershed (10-Digit HUC)	
190204010104 Thunder Bird Creek	MOA
190204010105 Outlet Eklutna River	MOA
Peters Creek Watershed (10-Digit HUC)	
190204010202 Outlet Peters Creek	MOA
Rabbit Creek-Frontal Turnagain Arm Watershed (10-Digit HUC)	
190204010701 Rabbit Creek ^b	MOA
190204010702 Furrow Creek-Frontal Turnagain Arm	MOA
Ship Creek Watershed (10-Digit HUC)	
190204010404 Outlet Ship Creek	MOA
^a Map of Service Area watersheds provided in Figure 4.	
^b S36 Site is located within this sub-watershed, see Figure 2.	
^c MOA – Municipality of Anchorage.	
^d Limited to that portion within the MOA boundaries.	

The Service Area includes an area linked by the major transportation corridors and associated commerce in the region including major highways in the state (Seward, Glenn, and Parks Highways), the Alaska Railroad, the Port of Alaska, and includes the core areas of the Municipality of Anchorage. Transportation and residential development projects have generated much of the demand for compensatory mitigation for authorized impacts to wetlands in Anchorage in the past. The potential for continued demand remains, as the need for development continues with population growth. Large linear projects e.g., the Alaska LNG gas pipeline project, are not proposed within the Service Area of S36 Site, but could stimulate other, related but more distant requirements for upgrades to infrastructure that incur unavoidable impacts to wetlands within the service area. For example, the potential use of the Port of Alaska, Glenn Highway, Alaska Railroad, and other infrastructure for

material transport in support of any large in the Cook Inlet region project could stimulate upgrades that may incur unavoidable impacts to wetlands in the service area. Upgrades to the infrastructure could stimulate other development once in place, e.g., industrial, commercial or residential developments with access roads, streets, and utilities with potential unavoidable wetland impacts in the service area.

The withdrawal of credits from the S36 Site shall be limited to the approved service area.

2 Objectives §332.4(c)(2)

The overall goal of this mitigation plan is to produce mitigation credits through the preservation and potential restoration of natural aquatic habitats at the S36 Site. The unique, sub-alpine environment has been threatened by potential land use changes in the past, and is identified by local community and others as a priority for preservation in the watershed. The headwater streams on the S35 Site flow into Little Rabbit Creek, which discharges to Turnagain Arm in upper Cook Inlet, a major salmon-producing estuary in the region. Salmon support important commercial, subsistence, and recreational fisheries in upper Cook Inlet and are an integral component of the estuarine environment of Turnagain Arm including a food source to the Threatened population of the beluga whale that inhabits Turnagain Arm (NOAA, 2016).

The mitigation objectives of the S36 Site are specific to meeting this overall goal:

1. Preserve and protect the aquatic resources in the S36 Site;
2. Restore natural wetlands on the S36 Site that are impacted by fill placement, groundwater diversion, or ORV traffic,
3. Restore natural stream flow and associated aquatic functions in headwater streams on the S36 Site that are impacted by fill, diversion, or channelization;

The HLB Mitigation Bank will generate compensatory mitigation credits from these restoration and preservation activities that can be used to offset authorized unavoidable impacts to aquatic resource functions within the approved service area. The credits are intended for use by the Sponsor directly for use by MOA-sponsored activities or sold to other applicants as authorized by the Corps.

2.1 Preservation

The S36 Site will be preserved to protect the aquatic resources and the ecological functions supported by the diverse mosaic of headwater streams, wetlands, and forested uplands in the sub-alpine headwaters of Little Rabbit Creek (Figure 5). Preservation measures for the S36 Site will provide a higher level of protection than provided for general park land managed by the MOA, including:

1. Preservation by a conservation easement (CE) and site protections to limit access;
2. Monitoring of the site for invasive species, impacts by off-road vehicles (ORVs), and the condition of signs, fencing, gates, or other access control measures;

3. A long-term stewardship fund based on estimated management and maintenance costs.
4. Implement long-term management and property transfer to an approved long-term steward.

Preservation of the S36 Site will be implemented by a conservation easement (CE). Site protection measures will be installed to prevent unauthorized uses as stipulated by CE, that are compatible with adopted Section 36 Park Plan, and otherwise allowed by law. The measures taken to protect the aquatic resources include restricting motor vehicle traffic throughout the S36 Site to the extent practicable and limiting pedestrian traffic to designated trails and seasons that are designed to avoid impact to the aquatic resources. Measures include physical structures to prevent access such as gates, bollards, fencing or other means along with signage to alert the public about the enforceable policies for using the property. Restrictions on the placement of facilities in the upland buffers surrounding the wetlands and streams reduces the opportunity for indirect impacts and reducing disturbance of wildlife that use the wetlands. The protection measures shall be designed to not prevent or interfere with implementation of the trails or other facilities specified in the Section 36 Park Master Plan (MOA, 2014b).

The property contains headwater streams, wetlands, and riparian forests that are mostly pristine and undisturbed, have been impacted by drainage modifications for roads in the area, and are potentially threatened by future land uses that could occur without permanent site protection measures in place. The rationale for preservation is presented in Section 3, Site Selection.

The loss or conversion of the wetland and adjacent upland habitats protected within the S36 Site would degrade the overall habitat quality of Little Rabbit Creek because of the contribution these provide to aquatic resource functions such as nutrient cycling, erosion control, and primary production in the streams.

The aquatic habitats within the S36 Site are summarized in Table 2 and Table 3; the details are provided in the Baseline Report (Attachment 1). This preservation action would generate mitigation credits according to the Credit Methodology description for the Bank and the S36 Site, included in Attachment 2.

Table 2. Aquatic and Other Habitats Preserved at the Section 36 Mitigation Site

Name ^a	Cowardin Class ^a	Acres
Wetland #1	PFO4B	0.82
Wetland #2	PFO4/SS1/EM1B-C	48.17
Wetland #3	PFO4/SS1/EM1B	3.19
Wetland #4	PF04/SS1/EM1C	1.60
Wetland #5	PFO4/SS4/EM1B-C	54.07
Total Acreage of Wetlands		107.85
Total Acreage of Parcels		229.30
Wetlands Percent of Total		47%

^aSee Figure 5 for locations. ^bCowardin et al. (1979) wetland habitat classification code.

Table 3. Streams Preserved at the Section 36 Mitigation Site

Stream Type / Name	Map Label	MOA Reach ID	Cowardin Class	Lineal Feet
Perennial Streams				
Little Rabbit Creek (LRC)	LRC-00-05	LRC-00 05.00	R3US5	906
LRC Tributary	LRC-20-01	LRC-20 01.01	R3US5	3,065
LRC Tributary	LRC-20-07	No ID; "20-07"	R3US5	386
LRC Tributary	LRC-20-X-1	No ID	R3US5	2,644
LRC Tributary	LRC-20-X-2	LRC-20 02.01	R3US5	1,195
LRC Tributary	LRC-20-X-3	No ID	R3US5	657
LRC Tributary	LRC-20-X-4	No ID	R3US5	439
LRC Tributary	LRC-20-X-5	No ID	R3US5	1,097
LRC Tributary	LRC-20-X-6	No ID	R3US5	428
LRC Tributary	LRC-20-X-7	No ID	R3US5	492
LRC Tributary	LRC-20-X-8	No ID	R3US5	981
LRC Tributary	LRC-20-X-9	No ID	R3US5	1,194
Perennial Total				13,484
Intermittent Streams				
LRC Tributary	LRC-20-X-10	No ID	R3US5	661
LRC Tributary	LRC-20-X-11	No ID	R3US5	723
LRC Tributary	LRC-20-X-12	No ID	R3US5	160
Intermittent Total				1,544
Grand Total				15,028

^a See Figure 5.

2.2 Restoration

Restoration actions will be planned and implemented only after a portion of the credits have been released for the site preservation milestone according to the credit release schedule, which allows for potential credit use or sale to generate compensation for the restoration work expense. The details of the restoration actions will be attached to the mitigation plan.

Wetland Restoration

Restoration through rehabilitation of an estimated 6.2 acres of palustrine shrub-scrub and emergent wetlands along the west side of Heights Hill Road will be evaluated for feasibility. The area was previously impacted by groundwater interception and diversion caused by the construction of Heights Hill Road (Figure 6). The potential project consists of French drains installed to divert water west under Heights Hill Road in order to rehydrate the dehydrated area. This would replicate the situation believed to occur upslope along the road, where a suspected French drain collects water on the east road ditch and conveys it under the road to the west side where wetland conditions occur (Figure 7). The first step in evaluating this potential project is to confirm this configuration at the top of the road. The rehabilitation would increase the area of natural wetland available to absorb the

groundwater flow down slope, which now is intercepted by the road ditch, and pass it beneath the roadway and into the shallow subsurface on the other side.

The result would increase the area of wetland to pre-road conditions and may contribute to better drainage along the roadway during high runoff events as it would direct water in the ditch away from the road intersection and downhill to the southwest.

This work would require a hydrology evaluation and the implementation would be contingent upon permit approvals.

Stream Restoration

A potential restoration project for the S36 Site identified during field investigations will be evaluated for feasibility, which consists of restoring approximately 1,000 feet of headwater stream by installing a culvert to convey Stream LRC-20-X-3 under Heights Hill Rd. and reconnect with the former channel and discharge into LRC-20-1 (Figure 8). Generally, the work would design, permitting and installation of a new culvert and minor hand clearing of the relic channel and manual installation of erosion control structures as necessary to rehabilitate the stream into its former flow path. The rehabilitation would increase the length and area of natural stream compared to the ditch flow path now experienced and may contribute to better drainage along the roadway during high runoff events as it would direct water in the ditch away from the road intersection downhill to the south (Figure 9). The potential project requires a hydrology evaluation to determine feasibility. Implementation would be contingent upon permit approvals (see below).

Additional upgrades of the stream culvert for LRC-20-07 under Jamie Dr. and LRC-20-01 under Heights Hill Rd. will be evaluated for the potential to enhance flow characteristics and sediment transport if appropriate.

3 Site Selection §332.4(c)(3)

The selection of the S36 Site as a compensatory mitigation site is based on the needs in the watershed and the practicability of accomplishing the mitigation. The needs in the watershed with respect to aquatic resource impacts and the priorities for mitigation are outlined in local and regional watershed and other resource planning documents. Documents relevant to the watershed needs in the Service Area for the S36 Site are listed in Table 4 with notes summarizing the connected policies.

The need for compensatory mitigation in the watershed is based also on the potential for authorized impacts to aquatic resources to occur. A range of development activities may result in authorized impacts in the service area, including transportation projects including roads, bridges, and pipelines, industrial site developments such as gravel mines, port sites, oil and gas operations, residential and commercial site developments. The practicability of establishing compensatory mitigation for future authorized impacts rests on the reliability of predicting these development activities within the service area.

A prioritization of municipality-owned properties with wetlands identified the S36 Site as the number 1 priority in the Rabbit Creek watershed and 8th overall among the properties ranked (MOA, 2012).

The background and history of the S36 Site, along with management plan alternatives derived from a public process are described in detail in the Section 36 Park Master Plan (MOA, 2014b). The plan alternatives all indicate preservation of the aquatic resources in the S36 Site.

3.1 Hydrological and Other Conditions

The hydrological conditions at the S36 Site at surrounding area are described in detail in the *Pilot Watershed Drainage Plan for Little Rabbit Creek and Little Survival Creek* (MOA, 2008), which notes these areas are subject to a combination of characteristics that affect drainage including high precipitation and steep slopes, as a result drainage is important issue for the maintenance of the roads and developed land that surrounds the S36 Site. A number of drainage problems that have occurred in the watersheds are highlighted in the plan, including:

- Roadway icings and areas of glaciation
- Flooding and high ground water
- Increased erosion and subsequent sedimentation
- Increased maintenance costs
- Decreased water quality and degradation of downstream waterways

The recommended solutions include: 1) protection of streams and drainageways via setbacks and easements, and 2) upgrading deficient existing drainage infrastructure (MOA, 2008, p. 30). Also, the drainage plan identifies controls such as native wetland storm water detention and quality facilities, which the S36 Site provides (MOA, 2008, p. 41).

There are three possible sources of water supplying the aquatic resources in the S36 Site: surface water, ground water, and precipitation. The source of water that supplies the wetlands and headwater streams on the S36 Site is from a combination of natural precipitation and groundwater discharge from small springs along the steep terrain on the north and east side of the property. Stormwater discharge emanating from developed areas and transported by ditches generally flows directly into the streams.

Detailed information about the aquatic resources at the S36 Site are presented in the Baseline Report (Attachment 1). Additional information about the geology, soils, and terrain of the area is discussed in the Section 36 Master Park Plan (MOA, 2014b).

Table 4. Watershed Needs Identified for the Section 36 Mitigation Site

Planning Document	Watersheds Included ^a	Watershed Needs Identified
Anchorage Wetlands Management Plan (MOA, 2014a).	MOA Watersheds	<p>Specifies management strategies, enforceable and administrative policies for individual wetlands throughout the Anchorage municipality.</p> <p>Identifies the watershed needs including balancing habitat protections with prioritization of development and public access (p. 4):</p> <p>Need A - To minimize alterations to wetlands that modify natural movements of both surface and subsurface water, damage fish and wildlife habitats, adversely affect biological productivity, reduce flood storage capacity, or alter nutrient exchange characteristics.</p> <p>Need B - To provide for the demand for community expansion, including residential and institutional housing, commercial and industrial establishments, and transportation corridors on a land base that is largely wetlands.</p>
Pilot Watershed Drainage Plan Little Rabbit Creek And Little Survival Creek Watersheds (MOA, 2008)	Site Specific	<p>This watershed drainage plan presents recommendations for the Little Survival and Little Rabbit Creek Watershed, including recognition of the stormwater and flood control functions of the wetlands: “<i>Controls include storm water detention and water quality ponds, native wetland storm water detention and quality facilities, roadside ditches, and culverts. Concept-level construction costs for these measures are estimated to be \$5,634,000”</i> (MOA, 2008, p.2). Identifies replacement of the culverts along the south side of the S36 Site including high priority for the Jamie Dr. at Carl and moderate priority for Jamie Dr. at Heights Hill Rd. (p. 41).</p>
Hillside District Plan (MOA, 2010)	Local Watershed	<p>Primary Policy 6-A: “Establish priorities and implementation methods to meet deficiencies in neighborhood and community parks, develop natural resource and greenbelt acquisition programs and funding, conduct additional greenbelt and natural resource inventory planning, and enhance the Hillside built/ green infrastructure system” (p. 2-7).</p>
Alaska Wildlife Action Plan (ADF&G, 2015)	All	<p>Describes threats to fish and wildlife and highlights priorities for conservation of species and habitats, which include land and water protection, wetlands protection, stream restoration (p. 122).</p>
<p>^a See Table 1 for listing of watersheds in the Service Area.</p>		

3.2 Watershed-Scale Features and Functions

The S36 Site includes diverse aquatic habitats that provide important ecological functions for the watershed and beyond. Habitats at the S36 Site include headwater streams, emergent wetlands, forested wetlands, and adjacent upland forests. The stream and wetland habitats on the S36 Site support a range of ecological functions and social values identified in the Anchorage Wetlands Management Plan (MOA, 2014a) as outlined in the following:

- Flood control – The S36 Site wetlands are recognized by the Anchorage Wetlands management Plan to contribute to flood control in the Little Rabbit Creek drainage (MOA, 2014a, p. 81). Wetlands such as those found on property can absorb floodwaters and slow the flow of water, which can reduce impacts to soil, stream banks, built structures, and fish habitat downstream. Wetlands also absorb stormwater, which slows runoff and reduces flooding. Flood control is an important function of wetlands in the Anchorage area
- Water quality – The S36 Site wetlands are recognized by the Anchorage Wetlands management Plan to contribute to water quality in the Little Rabbit Creek drainage (MOA, 2014a, p. 81). Wetland vegetation such as that found throughout the S36 Site is known to slow water flow, which traps the suspended sediments and associated toxicants from stormwater.
- Groundwater recharge and discharge – The S36 Site wetlands are recognized by the Anchorage Wetlands management Plan to contribute to groundwater discharge in the Little Rabbit Creek drainage by recognizing the wetlands constitute the headwaters of tributaries to Little Rabbit Creek (MOA, 2014a, p. 81). Groundwater discharge is evident along the headwater tributaries of Little Rabbit Creek on the property and is the primary source of water in the main channel of the stream. Surface water was observed throughout the S36 Site.
- Erosion protection and shoreline stabilization – The S36 Site wetlands are recognized by the Anchorage Wetlands Management Plan to contribute to flood control in the Little Rabbit Creek drainage (MOA, 2014a, p. 81). The dense vegetation throughout the S36 Site is likely to resist erosion and protect the shorelines of streams and resident fish and other aquatic biota’s habitats from flood damage, and important function for wetlands.
- Fish and wildlife habitat – The S36 Site wetlands are recognized by the Anchorage Wetlands Management Plan to contribute to wildlife habitat in the Little Rabbit Creek drainage (MOA, 2014a, p. 81). Section 36 is one of the few unfragmented areas in the Hillside District. It is a large contiguous block of land that contains several habitat types in a natural mosaic that provides for the seasonal requirements of many species of birds and animals. These include migration corridors for bear (MOA, 2014a, p. 81).
- Recreation, education, cultural resources, and open space – The S36 Site wetlands are adjacent to an elementary school to the west and the Park Plan identifies potential trail alternatives that would connect with the school.

Watershed sustainability is the maintenance of ecological processes, functions, biodiversity, and productivity into the future. The ecological functions of the S36 Site are self-sustaining and not reliant on active structures such as water pumps for maintaining water supply. The sources of water that maintain the conditions at the site are natural and include groundwater discharge, flooding, and precipitation (snow and rain).

Size and location are important factors in maintaining ecological sustainability. Preservation of S36 Site habitats contribute to sustainability by protecting approximately 230 acres of headwater streams, springs, wetlands, and buffering upland forests.

The S36 Site provides the appropriate type of aquatic resources (i.e., in-kind) to compensate for future unavoidable impacts authorized by DA permits to streams and freshwater wetlands in portions of Anchorage sub-basin watersheds within the Municipality of Anchorage.

Preservation is an appropriate form of mitigation in the Service Area considering the types of aquatic resources found within the local watershed and in upper Cook Inlet, as it offers a more reliable method for ensuring sustainability of functions than other forms of compensatory mitigation, such as creation or restoration. Aquatic resources in the S36 Site include springs and headwater streams, fens with emergent sedges and grasses, and mature forested wetlands buffered by mature upland forests. These types of resources would be exceptionally difficult to replicate through establishment actions. As discussed in the preamble to the Final Rule, "Preservation is particularly valuable for protecting unique, rare, or difficult-to-replace aquatic resources, such as bogs, fens, and streams, and may be the most appropriate form of compensatory mitigation for those resources." (Federal Register /Vol. 73, No. 70 /Thursday, April 10, 2008;19635). These habitat types are often logistically unfeasible, being cost-prohibitive to construct and monitor, within Anchorage watersheds as properties potentially suitable for wetland establishment are not readily available. Additionally, it can take several decades for a similar, fully-functional ecosystem to become established, and the long-term viability of such efforts is uncertain. In order to create, restore, or significantly enhance a wetland complex and assure it functions properly, a site would require intensive monitoring, adaptive management, and maintenance, further reducing the practicability of this compensatory mitigation alternative.

The S36 Site is owned by the Sponsor, which has the responsibility to "manage land in the HLB inventory with the objective of maximizing municipal purposes and benefits", as stated in the HLB policies (HLB, 2008). Preliminary land use planning of the property more than 20 years ago raised the concern of local residents in the then-sparse neighborhoods that existed in the Little Rabbit Creek drainage. Today there is significantly higher residential development in the area and the demand for open space for recreation and aesthetics are valued.

Drainage from residential and infrastructure development is an important issue for maintenance of aquatic resources in a sub-alpine environment such as the S36 Site where accumulations of snow and the resulting snowmelt, often quickly, results in high-intensity stormwater events. Development of the areas surrounding the S36 Site have increased the importance of preserving the flood-attenuating and water quality improvement functions provided by the aquatic resources. The need for drainage

management in the local watershed is stated in the Pilot Watershed Drainage Plan for Little Rabbit Creek (MOA, 2008, p. 1): *“Development is changing on the Hillside and has moved up the hillsides into higher elevations and steeper slopes. New subdivisions are being constructed at higher densities with greater land clearing. Driveways and streets are wider, paved, and have sidewalks. Runoff on the Hillside is increasing as a result. This increase has been dramatic with areas downstream of some new subdivisions receiving increased flows many times greater than undeveloped conditions.”*

The desire for outdoor recreation is an important activity common to Anchorage residents and the local community surrounding the S36 Site. There is demand for pedestrian facilities in the S36 Site as indicated by the preferred plan published in the Section 36 Master Park Plan (MOA, 2014b, p. 49). No facilities would be permitted in wetlands, although pedestrian trails would be located within upland buffers on west side of the S36 Site. No trails would be within 75 feet of mapped streams or wetlands. Final trail plans that could include the S36 Site upland buffers are subject to a final decision on the preferred alternative selected by the MOA Parks and Recreation Department.

The relic roads and powerline ROWs in the southwest part of the S36 Site have received ORV use and damage to emergent vegetation in the west parcel in the past few years, which is a threat to the natural character of the area and a source of disturbance to wildlife. These threats will be addressed through site protection measures to restrict access. Repair of damaged areas may be necessary and would be done as part of regular maintenance.

3.3 Size and Location Relative to Hydrologic Sources

The primary source of water supplying the wetlands and headwater streams on the S36 Site is from groundwater discharge (springs) along the east side.

The S36 Site occupies the upper position of the Little Rabbit Creek watershed at elevations that range between 1,000 feet above sea level on the west side to 1,300 feet on the northeast side. The S36 Site is approximately 230 acres, representing an estimated 1.5 percent of the 15,153-acre Rabbit Creek watershed (HUC12) and an estimated 5 percent of the 4,800-acre Little Rabbit Creek – Survival Creek drainage area.

3.4 Compatibility with Adjacent Land Uses and Watershed Plans

The S36 Site is compatible with the adjacent land uses and watershed plans. Table 5 provides a summary of the relevant planning documents addressing land use and watershed planning for the local watershed with policies or guidelines that directly or indirectly support preservation of the S36 Site.

3.5 Effects on Important Ecological Resources

Preservation of the S36 Site has a direct positive impact on the long-term sustainability of the aquatic habitats in the Little Rabbit Creek watershed by protecting approximately 230 acres of wetlands, headwater streams, and riparian uplands in the headwaters of the watershed.

The selection of the S36 Site for preservation is identified in local land use planning and watershed planning documents. Table 5 provides a listing of land use plans supporting the suitability of the S36 Site for preservation.

Table 5. Watershed and Other Plans Supporting Preservation of the Section 36 Mitigation Site

Planning Document	Scope	Relevance to the S36 Site
Anchorage Wetlands Management Plan (MOA, 2014a).	Site Specific	Identifies the wetlands on the property as #81 and classifies as category "A" indicating a high level of wetland function notably due to flood attenuation, water quality, open space/ aesthetics and habitat ; notes the wetlands constitute the headwaters of tributaries to Little Rabbit Creek and the creek corridor is important to large mammal movements especially bear. Cites land use and Park planning documents recommending preservation of wetlands with conservation easement.
Section 36 Park Master Plan (MOA, 2014b)	Site Specific	Identifies Plan for S36 Site Wetlands: "Maintain Existing Conditions and Preserve as Wildlife Corridor". Designates a 75-foot wetland setback. No facilities permitted in wetlands. Pedestrian trails may be located within upland buffers on west side of S36 Site under alternative plans. Final trail plan for S36 Site upland buffers subject to public process and decision by MOA Parks.
Hillside District Plan (MOA, 2010)	Local Watershed	Primary Policy 6-A: Establish priorities and implementation methods to meet deficiencies in neighborhood and community parks, develop natural resource and greenbelt acquisition programs and funding , conduct additional greenbelt and natural resource inventory planning, and enhance the Hillside built/ green infrastructure system.(p. 2-7)
Municipality of Anchorage, Wetlands Prioritization Project (MOA, 2012)	Site Specific	Properties owned by the MOA with wetlands indicated by the Anchorage Wetlands Management Plan were ranked for the potential to provide compensatory mitigation. Preservation of the S36 Site parcel scored 1st among 11 parcels within the Rabbit Creek watershed. Compared with all 42 parcels evaluated in the municipality the S36 Site ranked 8 th .

Planning Document	Scope	Relevance to the S36 Site
Heritage Land Bank 2018 Annual Work Program & Management Plan (MOA, 2018)	Site Specific	2018 Potential Projects (p.18): Section 36: HLB Parcels 2-125 & 2-126 - An area of approximately 232 acres located south of Clark’s Road, are being held in HLB inventory for preservation in accordance with the Section 36 Master Plan . The U.S. Army Corps of Engineers (COE) issued an Approved Jurisdictional Determination (JD) in September 2017 . This project will continue in 2018 as HLB works toward potential trail locations from the neighboring Community Councils, mitigation bank Site Plan development, Conservation Easement document , and COE review and approval of aforementioned documents.
Pilot Watershed Drainage Plan Little Rabbit Creek And Little Survival Creek Watersheds (MOA, 2008)	Local Watershed	This watershed drainage plan presents recommendations for the Little Survival and Little Rabbit Creek Watershed, including recognition of the stormwater and flood control functions of the wetlands: “Controls include storm water detention and water quality ponds, native wetland storm water detention and quality facilities , roadside ditches, and culverts. Concept-level construction costs for these measures are estimated to be \$5,634,000 (MOA, 2008, p.2). Identifies replacement of the culverts along the south side of the S36 Site including high priority for the Jamie Dr. at Carl and moderate priority for Jamie Dr. at Heights Hill Rd. (p. 41).
Total Maximum Daily Load (TMDL) for Fecal Coliform in the Waters of Little Rabbit Creek in Anchorage, Alaska. (ADEC, 2004)	Local Watershed	Identifies little Rabbit Creek on its 1998 303(d) list as water quality-limited due to fecal coliform, identifying urban runoff as the expected pollutant source . A Total Maximum Daily Load (TMDL) is established in this document to meet the requirements of Section 303(d)(1)(C) of the Clean Water Act. Frequent exceedances of the water quality criteria occurred during summer months, likely due to increased stormwater runoff and source activity.
Resolution by Bear Valley Community Council (2004)	Site Specific	Resolution requesting “transfer the management authority of all of Section 36, Township 12 North, Range 3 West, Seward Meridian, Alaska from the Heritage Land Bank to the Anchorage Parks and Recreation Department.” In response to perceived development threat of the PLI zoning at the time. Resolution highlights the presence of Class A wetlands in the S36 Site and the importance of preserving the property.

4 Site Protection Instrument §332.4(c)(4)

Preservation and site protection of the S36 Site will be implemented by conservation easement held by the Sponsor, a public municipal entity that is the designated land easement holder for the

Municipality and a qualified land management organization. A sample conservation easement is provided in Exhibit C of the Bank Instrument.

The S36 Site is not a split-estate property. The Sponsor owns both the surface and subsurface rights to the property. The conservation easement includes protections for the surface estate regardless of subsurface estate ownership.

The Title Report for the S36 Site property is provided in Exhibit B of the Bank Instrument.

5 Baseline Information §332.4(c)(5)

Baseline information about the S36 Site is provided in Attachment 1 and includes the Wetlands and Waters Report (RSE, 2017). Initial wetland delineation field work was performed during the summer (May through September) of 2016 by inspection of field points for wetland criteria and a ground survey of the entire site. A field inspection by the Corps of Engineers Alaska District was performed in 2016 and additional data was obtained prior to issuance of a jurisdictional determination for the property in 2017.

A summary of the acreage of wetlands and water habitats is provided in Table 2. Streams segments are summarized in Table 3. The results of the field inspections were generally consistent with the maps published in the Anchorage Wetlands Management Plan (MOA, 2014a, p. 81).

Additional information about the natural resource and other characteristics of the S36 Site are described in the Section 36 Master Park Plan (MOA, 2014b).

5.1 Water Rights [§332.8(u)(4)]

The Sponsor does not hold surface water rights on the S36 Site property. Domestic water wells are likely present in the residential areas located to the south.

The Sponsor will evaluate the need for a water reservation for the S36 Site as part of the long-term management.

6 Determination of Credits §332.4(c)(6)

Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic functions is based on the resources restored, established, enhanced, or preserved.

The determination of credits for the HLB Mitigation Bank is based on the Anchorage Debit-Credit Method (ADCM; Dean, 2011). The preliminary ADCM calculations for the S36 Site are presented in Attachment 2.

The ADCM credit calculations are geographic-based and utilize GIS to generally categorize and analyze small portions of the aquatic resources based on wetland type and impacts from direct and indirect impacts that degrade the quality of wetland function. The primary factor in calculation of credits is the surface area of the aquatic resource, which all the credits are based on. The area values are adjusted for the type of mitigation, e.g., restoration, enhancement, creation, or preservation, with

corresponding mitigation ratios applied (the ratio of impact acreage to mitigation acreage), and the effects of indirect impacts are applied to the calculation. Maps resulting from the GIS analysis for ADCM calculations are presented Figure 10, which shows the ADCM classification of each portion of land in the S36 Site and Figure 11 that shows the indirect impact buffers that extend into the site, representing the potential impact on the credits in the affected land polygon shown on the map.

During the operation of the Bank, the Sponsor may evaluate the feasibility of modifying the credit calculations to use the utilize the Alaska District Credit Debit Methodology, Ver. 1.0 (Corps, 2017) as a secondary basis for the calculation method. The purpose of this is to provide calculations from both methods in anticipation of greater use of the Alaska method in the future. The use of the Alaska credit calculation model requires a functional assessment to determine the Functional Capacity Index (FCI), a value ranging between 0 and 1.0 that indicates the magnitude of ecological function for an area based on input parameters usually collected from both field and desktop analysis. The Hydrogeographic (HGM) models for stream and wetland type aquatic habitats may be applied at the site to calculate FCI values and estimate relative ecological functioning at the site. Alternatively, the existing ADCM function-based classifications may provide an alternative method to score the FCI.

7 Mitigation Work Plan §332.4(c)(7)

A description of the work that will be performed to achieve the mitigation objectives stated above is presented in the following sections.

7.1 Preservation of S36 Site

Preservation of the S36 Site will be implemented by placing a conservation easement on the property as described in Section 6, Site Protection Instrument. In addition, measures will be taken to limit access with signage, bollards, fencing, or other measures as appropriate to prevent damage or disturbance to the aquatic resources. The property will be maintained and monitored periodically for invasive species, impacts by off-road vehicles (ORVs), and the condition of signs, fencing, gates, or other access control structures.

The long-term management of the S36 Site will be the responsibility of the MOA Parks and Recreation Department in following with the terms of the conservation easement. The property will be officially transferred to MOA Parks and Recreation Department and will serve as the Long-Term Steward of the S36 Site.

7.2 Potential Wetland Restoration

A potential wetland restoration project at the S36 Site is the rehabilitation of approximately 6.2 acres of palustrine shrub-scrub and emergent wetlands along the west side of Heights Hill Road, an area impacted by groundwater interception and diversion of groundwater flow into the ditch along east side of Heights Hill Road (Figure 6). The potential restoration would generally involve installing French drains and/or culverts to divert water west beneath Heights Hill Road and discharge it sub-surface in French drains, allowing the water to infiltrate into the interflow of shallow groundwater. Similarly, upgrades to the culvert beneath Jamie Drive along the south side may improve hydrologic conditions and rehydrate the area (Figure 7).

The feasibility of the wetland restoration will be evaluated and if found acceptable a work plan with preliminary designs will be submitted to the Corps for review and approval. The approved work plans will be incorporated as a modification to the mitigation plan.

Repair of ORV damage in wetland areas will be evaluated and if warranted a work plan will be prepared for performing rehabilitation be soil stabilization and/or seeding to re-establish vegetation using an appropriate native seed mixture. Repair of existing ORV damage does not generate credits.

7.3 Potential Stream Restoration

A potential stream restoration project at the S36 Site is rehabilitation of an estimated 1,000 lineal feet (estimated 1,500 sq. ft. area) of headwater stream segment lost by interception and diversion of Stream LRC-20-X-3 caused by the original construction of Heights Hill Road(Figure 8). Currently, the water flows into the ditch along east side of Heights Hill Road and into Stream

The preliminary work plan would involve installing a stream culvert to convey Stream LRC-20-X-3 under Heights Hill Rd. and reconnect with former channel on the west side. The former channel is visible to the confluence with Stream LRC-20-01, which is the main channel of Little Rabbit Creek flowing through the property. The relic channel on the west side of the road would require minor clearing (manual) and small, hand-installed erosion control measures in strategic locations (Figure 9).

Also, an evaluation of the potential upgrade of the LRC-20-01 culvert at Heights Hill Rd. and Jamie Dr. intersection and the LRC-20-07 culvert under Jamie Dr. will be conducted to identify the need for rehabilitation to improve drainage and stream functions. If a decision to proceed with the project, the culvert design will be performed by a professional engineer in following the MOA drainage design criteria. The design will result in a self-maintaining, sustainable water conveyance.

Permits for construction of the fish passage may include, among others:

- Corps Section 404 (may qualify for Nation-Wide Permit)
- ADF&G Fish Habitat
- ADEC 401 Water Quality Certification/Waiver
- ADNR Temporary Water Use

Copies of these permits shall be provided to the Corps.

Monitoring of the restoration site will be performed for a period of 5 years, beginning with the year of installation (i.e., year 1). Monitoring reports will be submitted to the Corps starting the first year, then every other year thereafter, with a final report submitted after the 5th year of monitoring. The monitoring will include photos and other data acquisition to document the restored fish passage.

Long-term management and protection of the rehabilitated fish passage culvert will be the responsibility of MOA Parks and Recreation Department in coordination with ARRC. In general, the management and maintenance of the rehabilitated culvert will be performed in a manner consistent

with accepted practices and standard operating procedures for road maintenance and other applicable requirements.

Measures shall be implemented during long term management and maintenance to prevent stormwater pollution from entering the stream as a result of the restoration and that prevention measures are in place and functioning.

7.4 Instrument Modification Required

A modification of the Bank Instrument including the Mitigation Plan and Credit Release Schedule are required to produce credits from restoration projects. The Sponsor shall submit a request for modification of the Bank Instrument along with the work plans, permits, and other required materials to the Corps for review. Implementation of restoration projects is contingent upon Corps approval and individual permit approvals.

Aquatic restoration projects require hydrology evaluations to determine feasibility and evaluate existing conditions for design application. Work plans submitted for aquatic restoration shall include hydrological evaluation to consider the potential impacts on local drainage (see MOA, 2008).

8 Maintenance Plan §332.4(c)(8)

Management of the S36 Site including any maintenance is the responsibility of the MOA Parks Department in compliance with the conservation easement and other adopted policies that apply to the property.

9 Performance Standards §332.4(c)(9)

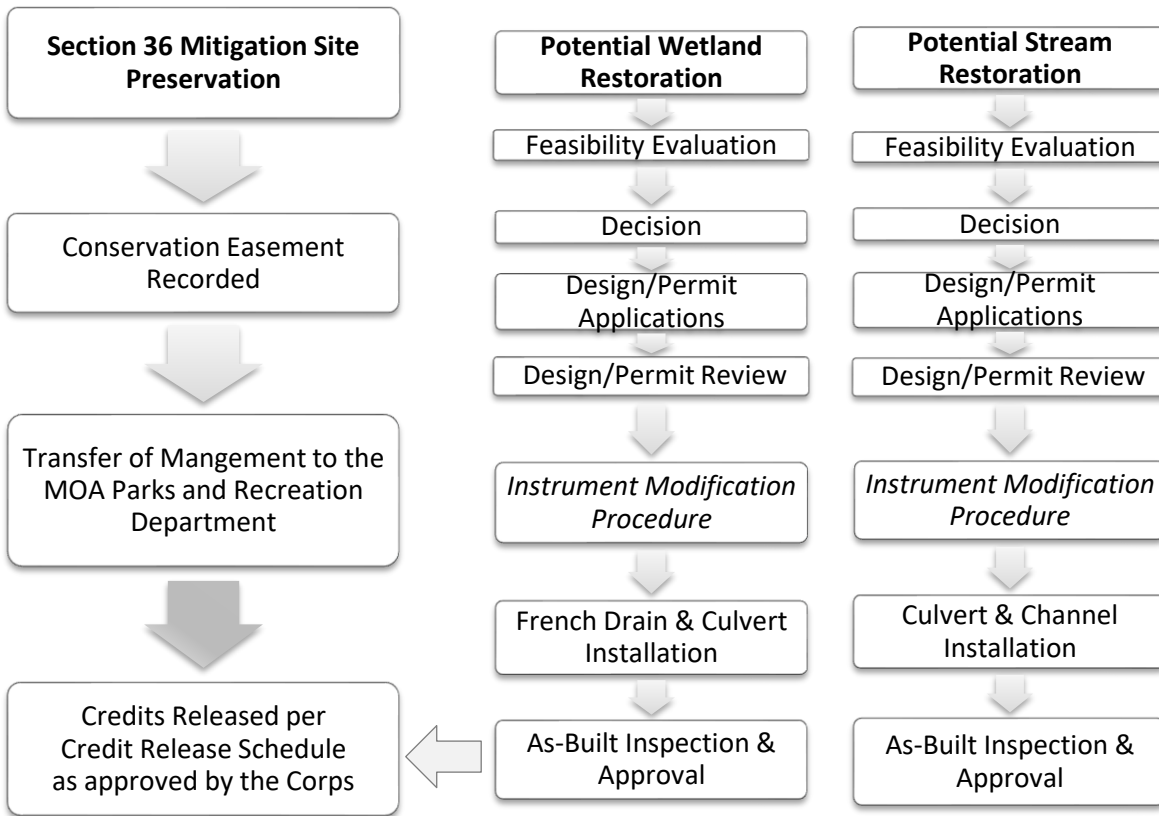
The performance standard for the preservation of the S36 Site is the recording of the conservation easement and transfer of management responsibility to the MOA Parks and Recreation Department.

The performance standard for wetland restoration will include documentation of positive wetland hydrology developing in the area within a target time period to be specified in the approved work plan. Other wetland characters of hydric soil and hydrophytic vegetation would take several years to develop in the cool climate and may not be useful in the short-term for monitoring.

The performance standard for successful stream completion of the crossing will include as-built approval from the MOA for drainage design criteria, ADF&G, and the Corps that the installation meets fish habitat permit conditions, submitted along with supporting photographs and measurements, as appropriate, all submitted in the first annual report documenting completion of the restoration as authorized. Monitoring will be conducted as described in Section 3, Mitigation Work Plan. Reports from annual monitoring will be submitted to the Corps according to the credit release presented in Table 6.

The credit release schedule identifies specific site establishment milestones, which are sets of performance standards that represent incremental advancement of the mitigation action toward complete establishment of the mitigation site.

The process of credit production and release for use by the Bank follows a series of steps for bank establishment that are summarized by the following diagram:



The MOA Parks and Recreation will manage the S36 Site property. The Sponsor will continue to own S36 Site property. The Sponsor will use the credits to satisfy mitigation needs for the MOA or market the credits for sale, as approved, until all credits are withdrawn from the Bank ledger.

The Sponsor will provide receipts for credit withdrawals and maintain a credit ledger for the S36 Site that accounts for credits including the transaction type (e.g., release, withdrawal), the name and permit number of projects withdrawing credits, wetland classification, acreage and watershed, among other information. Credit receipts and ledgers will be submitted to the Corps according to the approved Bank Instrument. Example credit receipt and ledger are included in Exhibit D of the Bank Instrument.

10 Monitoring Requirements §332.4(c)(10)

The Sponsor shall perform monitoring of S36 Site for a period of 5 years following establishment. Restoration projects, if performed, will be monitored for a period of 5 years following the project completion, with an as-built design provided with the first annual monitoring report.

Management of the S36 Site including any monitoring is the responsibility of the MOA Parks and Recreation Department in coordination with the Sponsor.

10.1 General Monitoring Protocol

The monitoring of the S36 Site will consist of the following:

- (1) Inspection of the site to monitor the condition of structural elements and facilities of the site. Documentation will be gathered including photos of the site.
- (2) Inspection of restored wetland areas and/or restored stream channels, including structural elements such as culverts. Restored wetland areas will be inspected for wetland indicators used for jurisdictional determinations using standard wetland protocols. Documentation will be gathered and including photos.
- (3) Inspection of the restoration site for noxious weeds as necessary to meet the intent of the Alaska Department of Agriculture's Noxious Weed Policies (AS 03.05 010; AS 03.05.030; AS 44.37.030; 11AAC 34.020). The observation of any noxious weed or infestation of other invasive, non-native plants growing on the site shall be documented and reported to the Corps. The management action will be determined in consultation with the Corps.

The Sponsor will submit monitoring reports to the Corps according to the credit release schedule (Table 6).

11 Long-term Management Plan §332.4(c)(11)

The MOA Parks and Recreation Department will be responsible for long-term management of the S36 Site in following with the terms of the conservation easement.

11.1 Goals and Objectives

The S36 Site possesses aquatic resources that are important to the Sponsor, the people of the Municipality of Anchorage, the State of Alaska, and the United States. The Bank site provides high quality sub-alpine palustrine wetlands and contains jurisdictional waters of the United States. Individually and collectively, these aquatic resource and habitat values comprise the "Conservation Values" of the Bank.

The goal of long-term management is to ensure that the Conservation Values of the S36 Site are monitored, managed, and maintained over the long term by transferring management responsibilities to a qualified Long-Term Steward upon mitigation site closure. Long-term management shall support the Conservation Values of the Bank. Long-term management is intended to promote the long-term functioning of the aquatic resources. As such, long-term management objectives support the ecological goals and objectives identified for Bank establishment. Long-term management objectives for the S36 Site are as follows:

1. Maintain the headwater streams and their sources;
2. Maintain the emergent, shrub-scrub, and forested wetlands;

3. Maintain diverse wetland plant communities dominated by native species.
4. Maintain habitat conditions for wildlife.

Long-term management will be done on all land within the S36 Site boundary. The protected aquatic resources will not be altered without authorization from the Corps.

11.2 Limits of Responsibility

The Long-Term Steward will not be responsible for mitigation site failure attributed to natural catastrophes such as flood, drought, disease, regional pest infestation, and others that are beyond their reasonable control. Active management is not expected for ecological change that comes about as a result of processes such as climate change that may affect the wetlands. Over time, natural successional processes will occur that may affect wetland functioning or wetland area. For example, the sub-alpine environment may result in changes to drainage and hydrology characteristics on the site and temperature changes over time may alter evapotranspiration and species composition.

11.3 Stewardship Fund

A stewardship fund will be established by the Sponsor to satisfy management and maintenance costs after bank closure. The stewardship fund account will be established with a portion of the receipts from credit sales, voluntary deposits by the Sponsor, or a combination of these.

The fund by to a level to provide a self-sustaining level of management and maintenance for the S36 Site based on estimated costs. The potential costs are believed to be minimal after installation of the initial access control structures and signage is placed, as the management of the S36 Site and adjacent areas of section 36 will be managed by the same entity, MOA Parks and Recreation Department.

The stewardship fund account amount will be established prior closure of the S36 Site and documentation of the stewardship fund account and the calculations used to derive the amount will be provided to the Corps for approval. The final credit release is contingent upon an approved stewardship fund established for the S36 Site.

11.4 Monitoring

The monitoring will consist of the following:

- (1) Periodic patrols of the S36 Site for signs of trespass and vandalism. (e.g. collect and dispose of trash)
- (2) Monitoring the condition of structural elements and facilities of the S36 Site such as signage.
- (3) Inspection of the S36 Site every five years, or at another appropriate frequency determined by the Steward, to identify and locate listed noxious and other invasive, non-native plants (weeds) as necessary to meet the intent of the Alaska Department of Agriculture's Noxious Weed Policies (AS 03.05 010; AS 03.05.030; AS 44.37.030; 11AAC 34.020).

Funds from the Long-Term Stewardship Fund may be used for provisions (1)-(3) above in accordance with the approved Long-Term Management Plan. Unless otherwise noted, monitoring will occur annually during the growing season in order to trigger necessary management activities that will protect wetland functions and to maintain a consistent record of conditions. More frequent monitoring visits, such as late summer for maximum vegetation growth and fall after the shrub leaves have fallen and the ground surface is more visible.

Reports are not submitted to the regulatory agencies following closure of the Bank.

12 Adaptive Management Plan §332.4(c)(12)

The MOA Parks and Recreation Department will be responsible for adaptive management of the S36 Site. Long-term management is intended to be adaptive, meaning the development of a management strategy that anticipates likely challenges associated with compensatory mitigation projects and provides for the implementation of actions to address those challenges, as well as unforeseen changes to those projects. It requires consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and guides modification of those projects to optimize performance. It includes the selection of appropriate measures that will ensure that the aquatic resource functions are provided and involves analysis of monitoring results to identify potential problems of a compensatory mitigation project and the identification and implementation of measures to rectify those problems.

This Plan is intended to be flexible and adaptive, and is recommended to be updated every 5 years or as needed. Upon closure, in the event the Conservation Values of the S36 Site are determined by the Steward to be fundamentally compromised, the Steward will use available funding to develop and implement a Corrective Response Plan. If necessary, the Steward will collaborate with other agencies and organizations to seek additional funding to implement the corrective response plan. This Plan is not intended to create an unfunded financial burden on the Steward.

13 Financial Assurances §332.4(c)(13)

Financial assurances are not required for establishment of the S36 Site. There are no risks or delays before the aquatic resources are fully functional and capable of providing mitigation credits.

Other forms of mitigation including restoration, enhancement, or creation of aquatic resources incur risks of failure and/or delays due to construction schedules, growing seasons or other limiting factors and are not fully functional until a time period, e.g., growing seasons, after installation. In these cases, credits are not released until specific performance standards are met or financial assurances are set aside, such as a bond, to allow credits to be released prior to the site becoming fully functional – which is not the case for preservation of the S36 Site.

The performance standard for preservation of the S36 Site consist of administrative actions of recording the conservation easement and transfer of management to the Parks and Recreation Department, along with a limited number of site protection measures installed such as gates, bollards, fencing or signage, which the Sponsor will fund directly and install prior to the initial credit release.

The potential wetland and stream restoration contemplated in this mitigation plan would not require financial assurances. The projects will require attainment of performance standards for credit release. Modification of the Bank Instrument is required to supplement the Mitigation Plan and Credit Release Schedule for potential restoration projects.

14 Other Information §332.4(c)(14)

Other information will be provided to the district engineer as required to provide additional information as necessary to determine the appropriateness, feasibility, and practicability of the compensatory mitigation project.

15 Credit Release Schedule §332.8(D)(6)(iii)(B)

The credit release schedule for the S36 Site is summarized in Table 6.

Table 6. Credit Release Schedule for the Section 36 Mitigation Site

Milestone Number	Year	Milestone	Credits Released (Percent of Total)	Cumulative
I	0	Site Protection of S36 Site in Place, Conservation Easement Recorded; Long-Term Steward in Place Performance Standards Achieved (Recorded Documents Submitted to Corps)	65%	65%
II	1	First Annual Monitoring Performance Standards Achieved (Report Submitted to Corps)	10%	75%
III	2	Second Annual Monitoring Performance Standards Maintained	0	75%
IV	3	Third Annual Monitoring Performance Standards Maintained (Monitoring Report Submitted to Corps)	10%	85%
V	4	Fourth Annual Monitoring Performance Standards Maintained	0	85%
VI	5	Final Annual Monitoring Performance Standards Maintained (Report Submitted to Corps)	15%	100%

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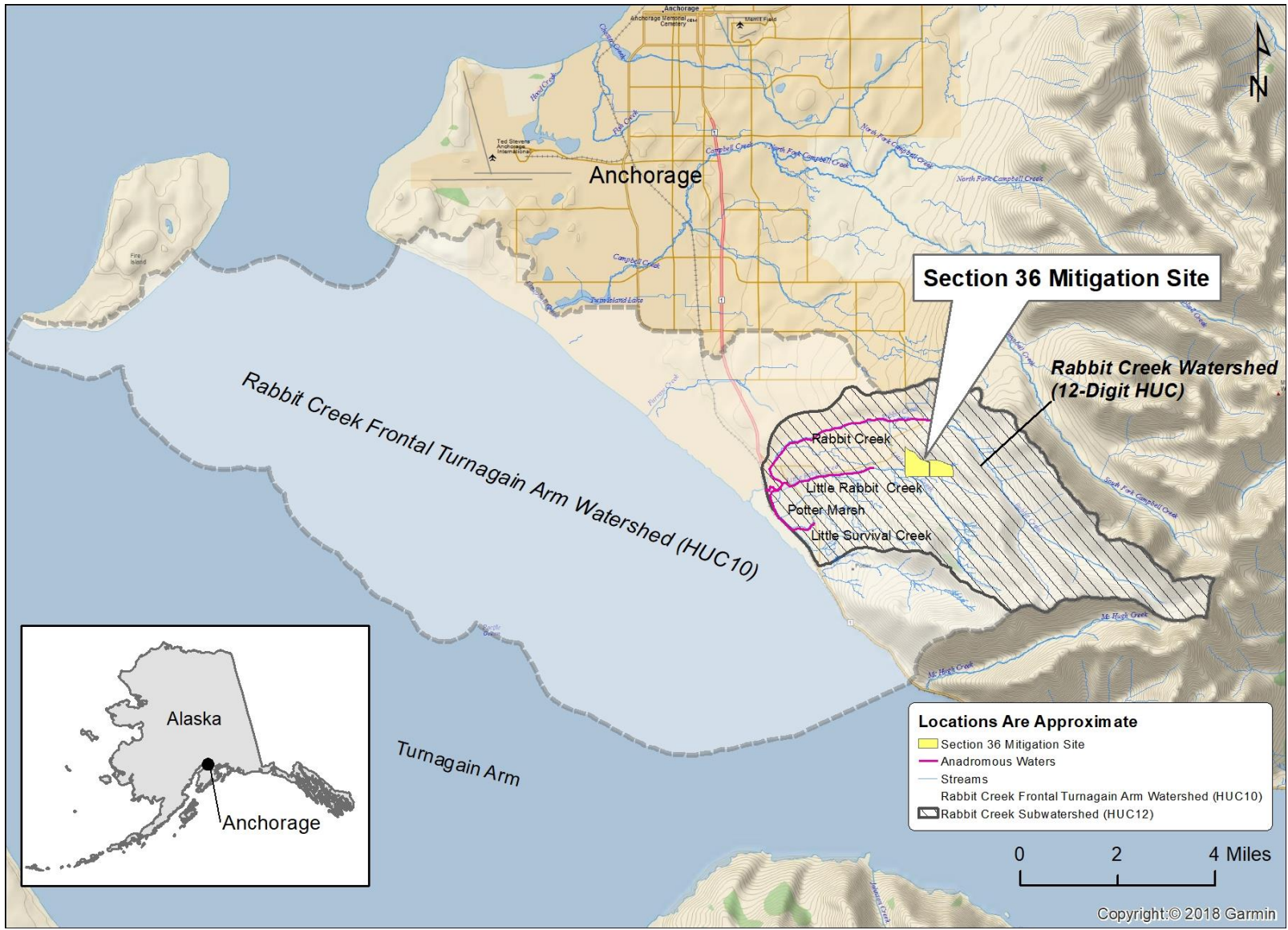


Figure 1. Location of the Section 36 Mitigation Site

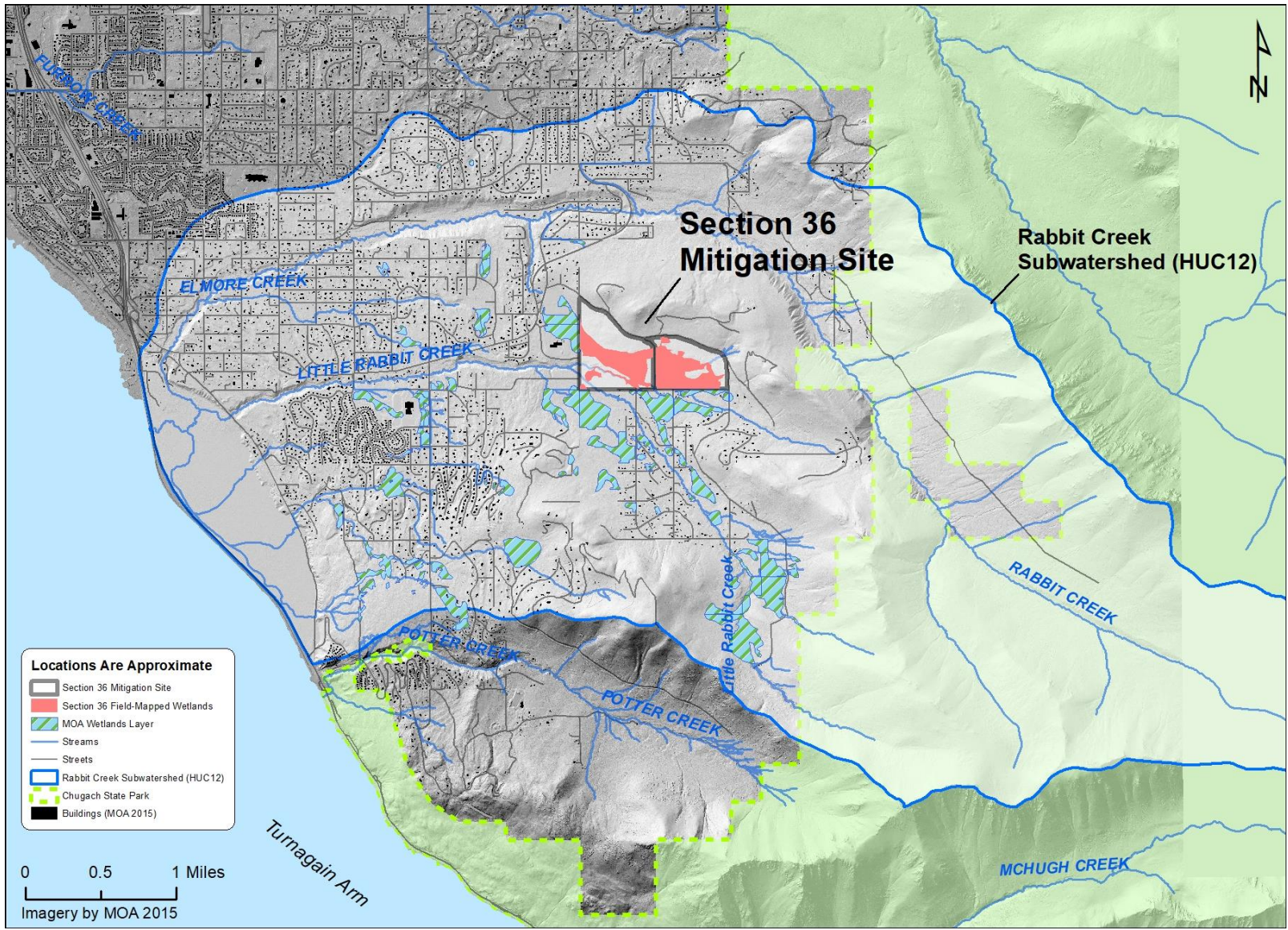


Figure 2. Watershed Position of the Section 36 Mitigation Site

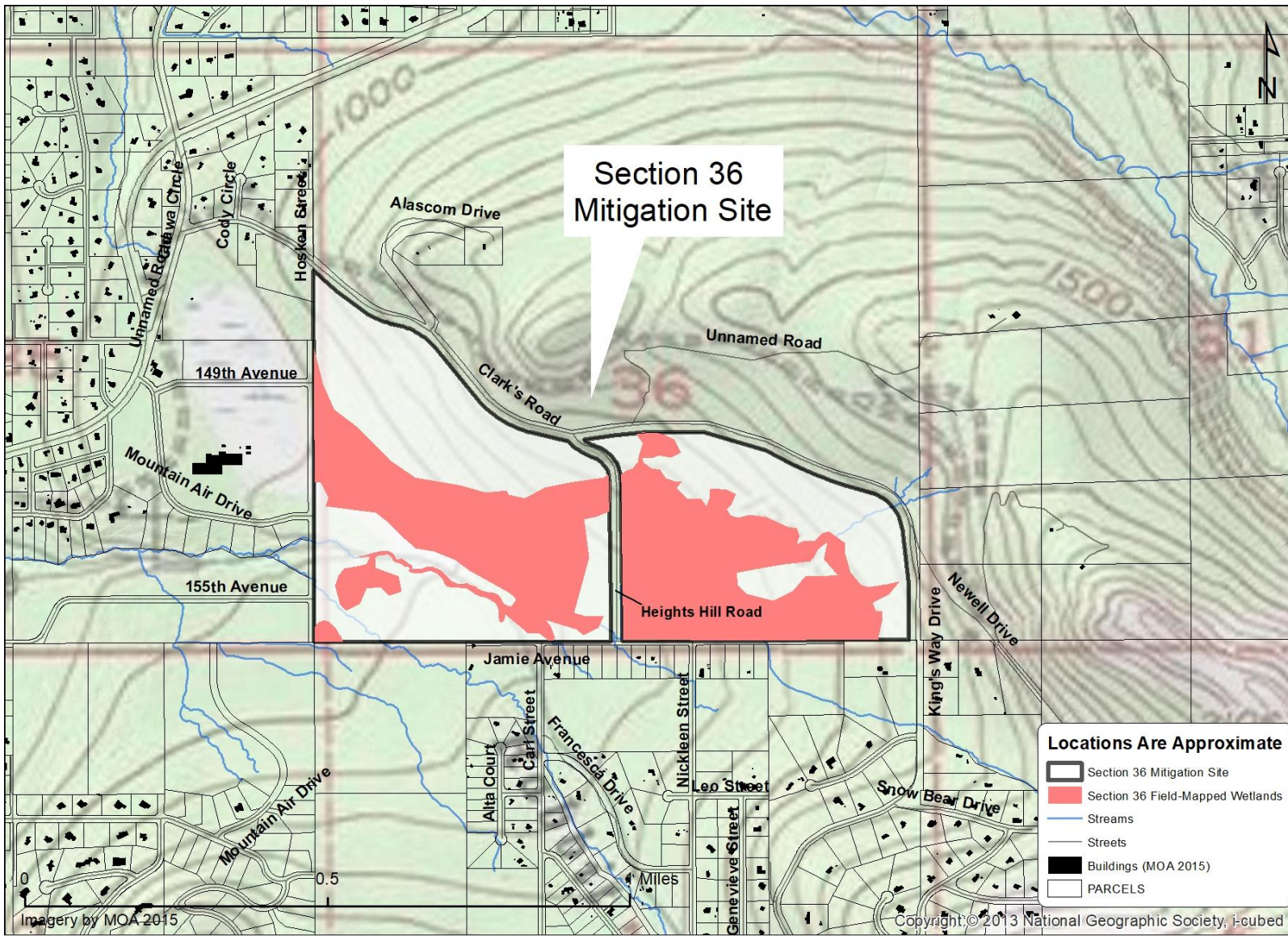


Figure 3. Vicinity of the Section 36 Mitigation Site

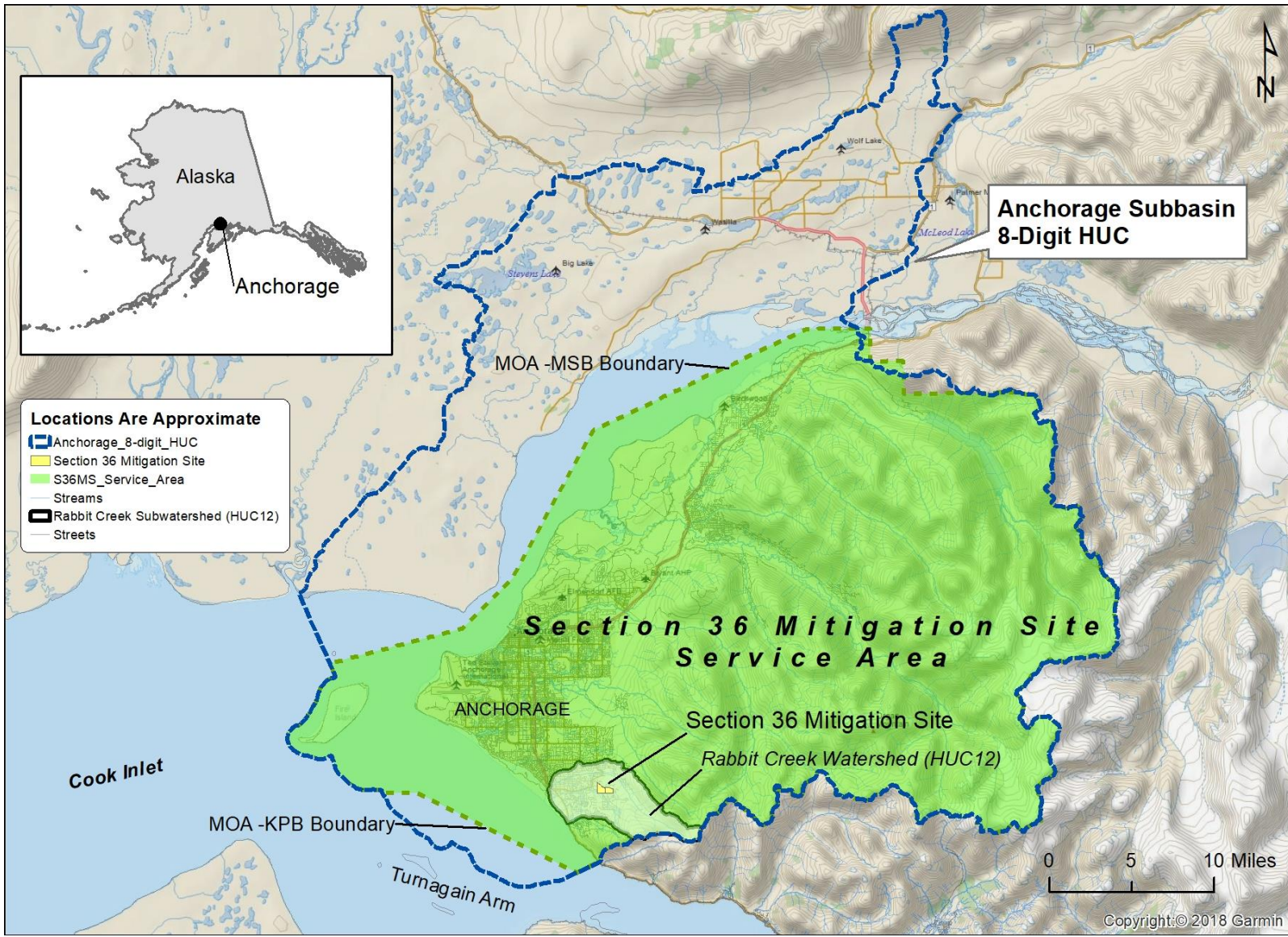


Figure 4. Service Area for the Section 36 Mitigation Site

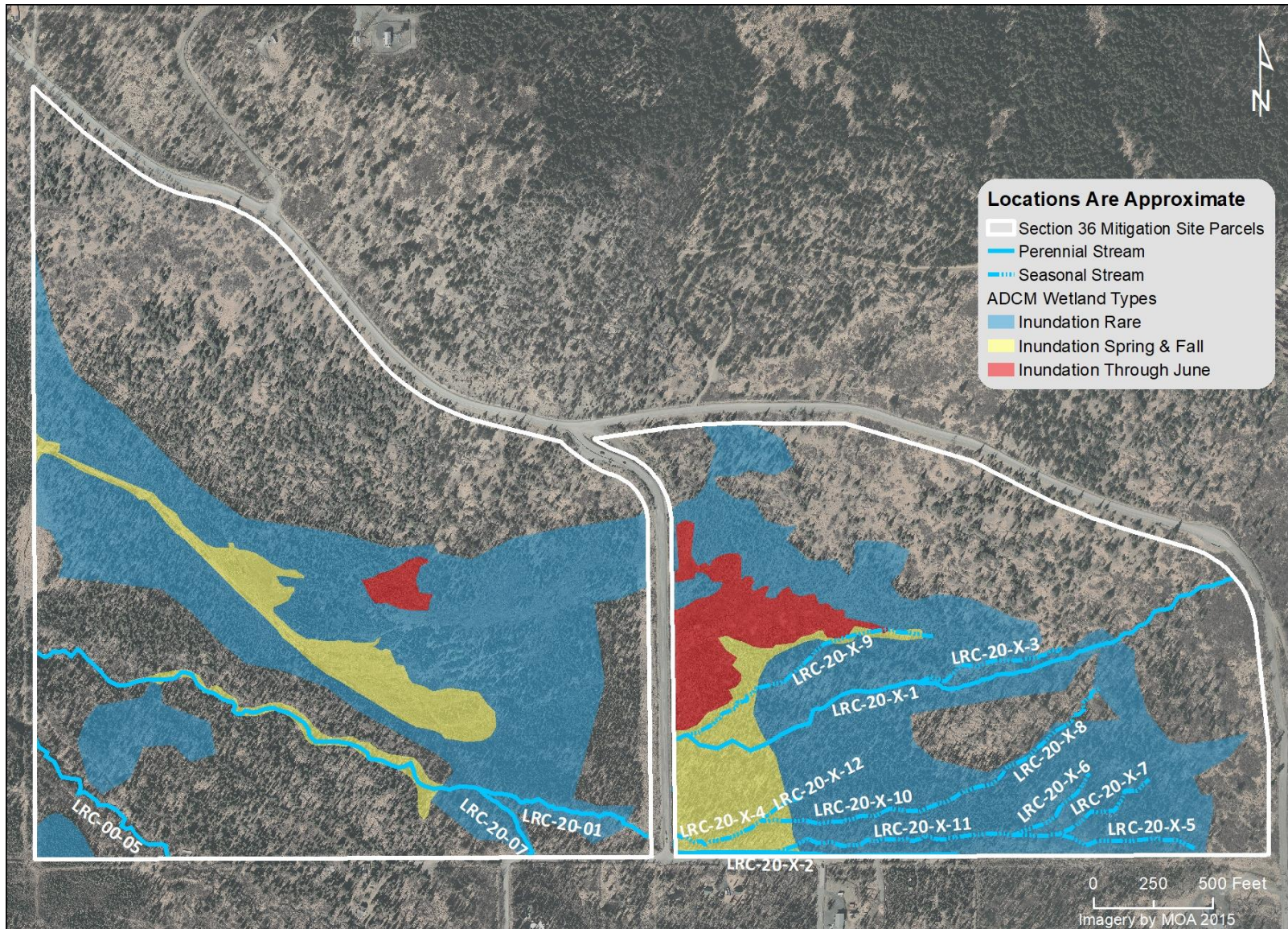


Figure 5. Wetlands and Streams in the Section 36 Mitigation Site

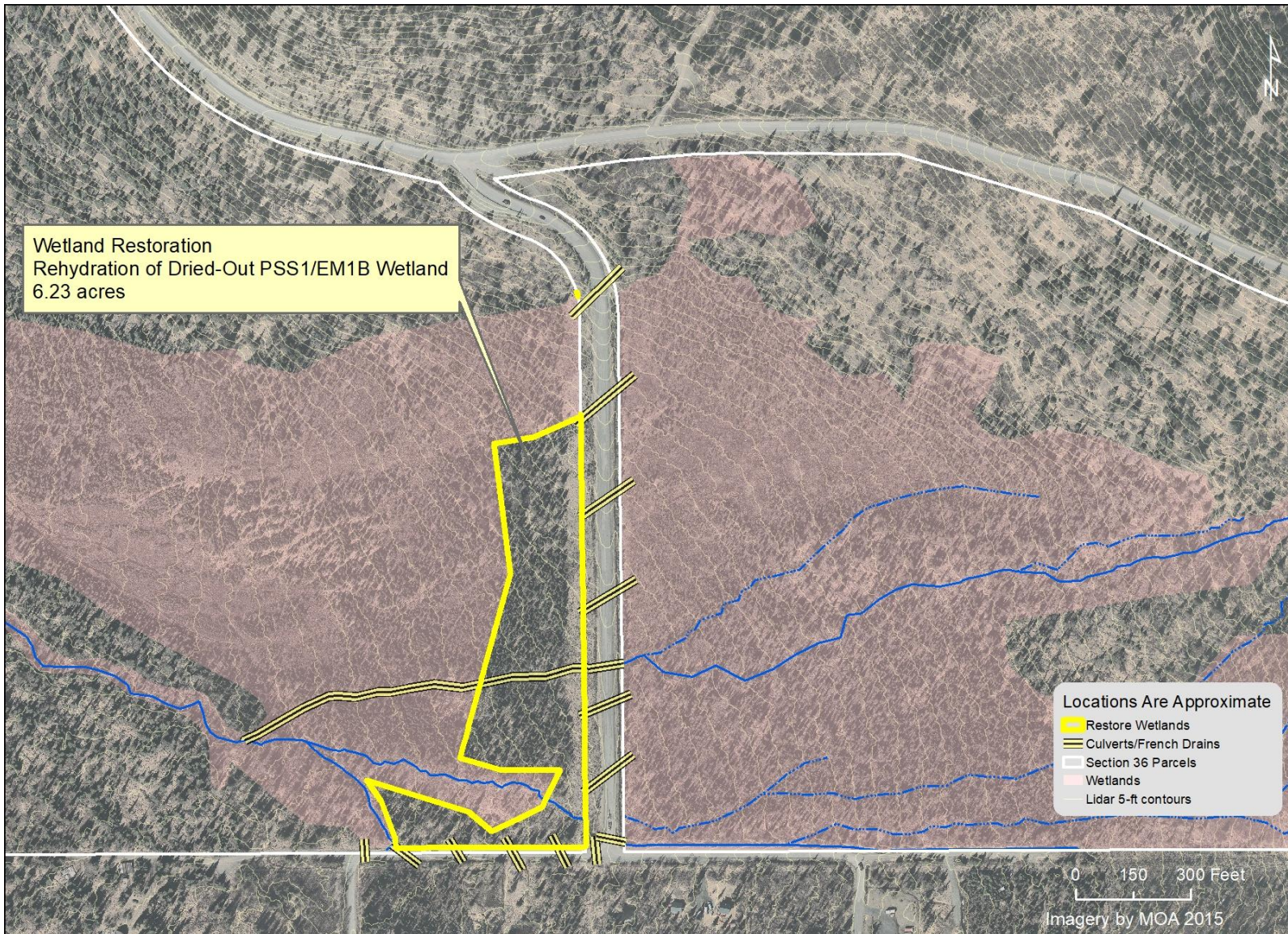


Figure 6. Potential Wetland Restoration in the Section 36 Mitigation Site

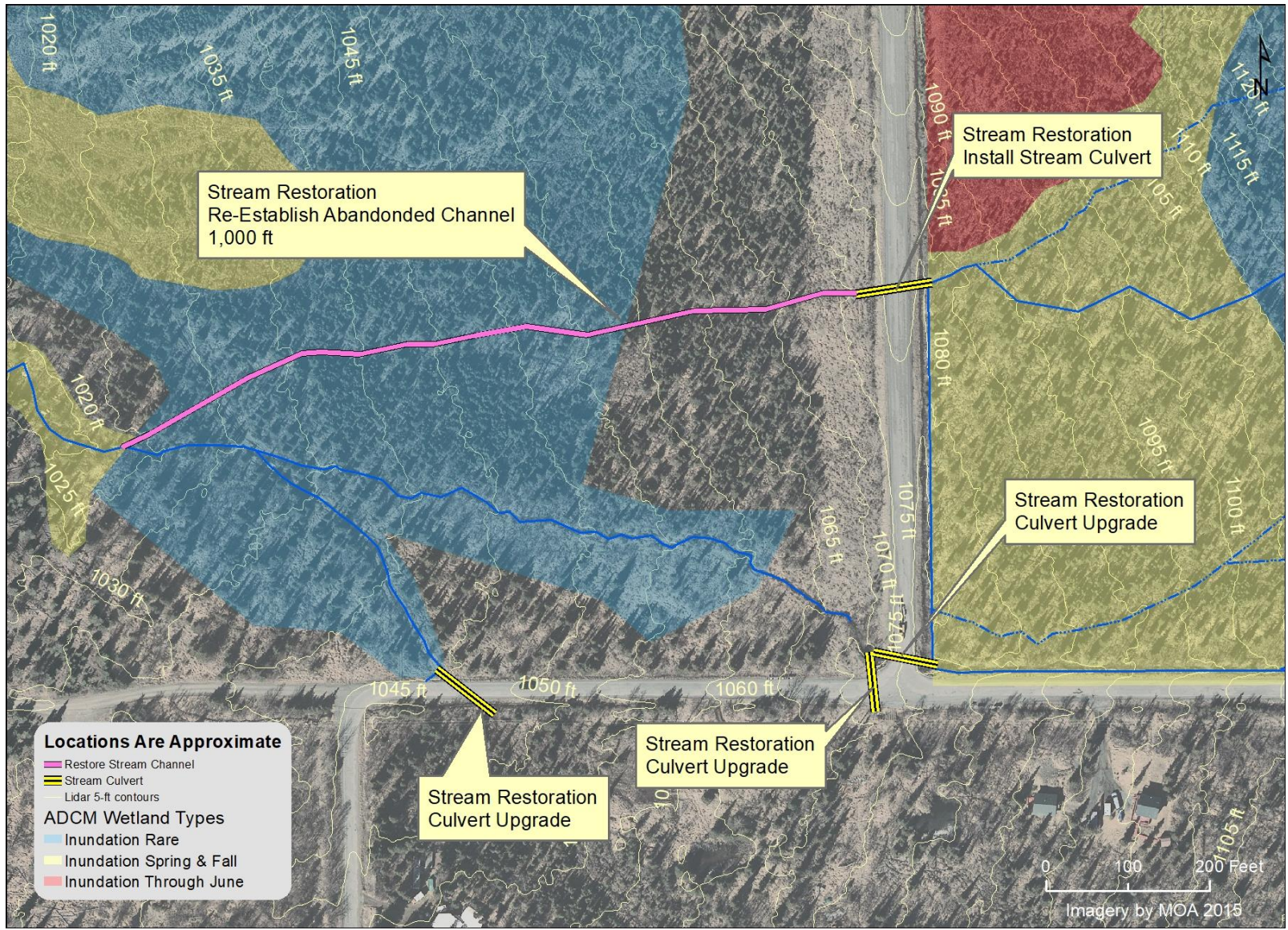


Figure 8. Potential Stream Restoration in the Section 36 Mitigation Site.

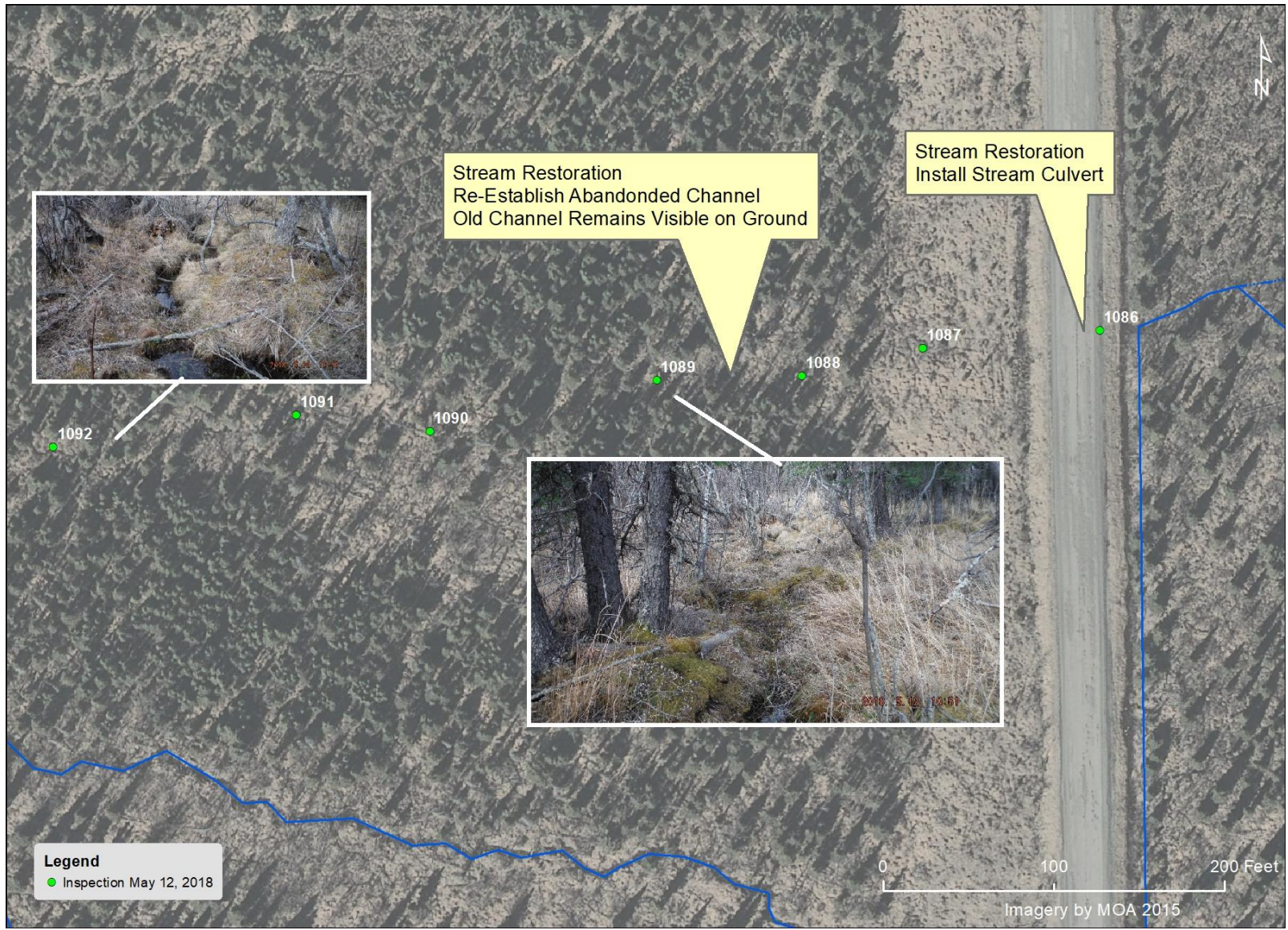


Figure 9. Detail of Potentil Stream Restoration in the Section 36 Mitigation Site.

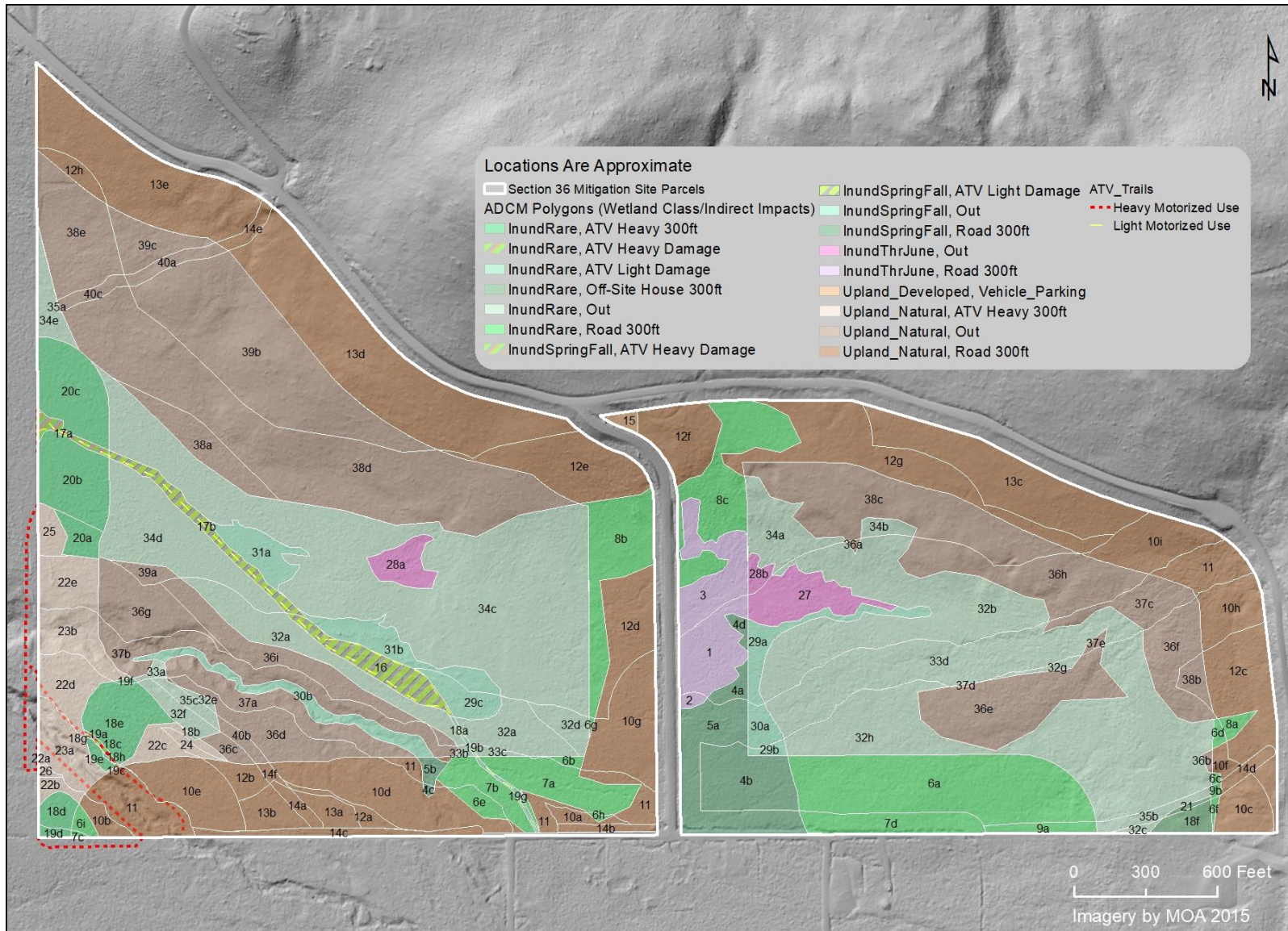


Figure 10. Anchorage Debit-Credit Method (ADCM) Polygons in the Section 36 Mitigation Site.

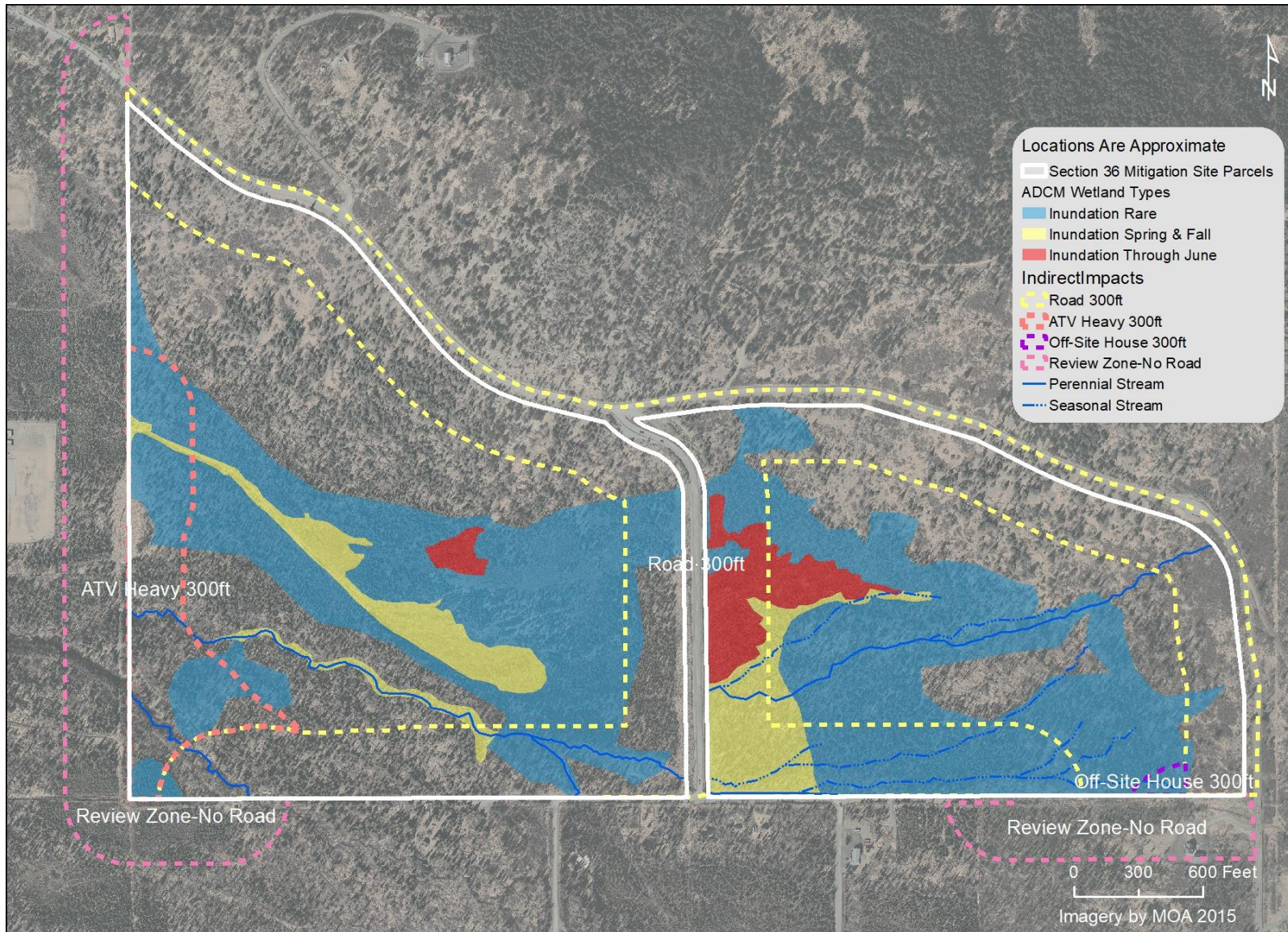


Figure 11. ADCM Indirect Impact Zones in the Section 36 Mitigation Site.

Attachment 1 – Baseline Report

Preliminary Determination of Wetlands & Waters

**Municipality of Anchorage
Heritage Land Bank (HLB) Section 36
MOA Parcels 01713105000 and 01713106000;
SEC 36, T12N, R3W, SM; N61.08° W149.74° (NAD83);
USGS Topo Anchorage A-8(NW)**

April 4, 2017

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Introduction

This report summarizes a delineation of wetlands and waters performed by Pat Athey of Hemlock Scientific, LLC at a property located within the Rabbit Creek watershed at MOA Parcels 01713105000 and 01713106000; SEC 36, T12N, R3W, SM; N61.08° W149.74° (NAD83); USGS Topo Anchorage A-8(NW). This report includes maps, data, and photos taken during the inspection. The maps are provided in Attachment 1. Wetland data forms for the determination points are provided in Attachment 2. Local climatic data for the weeks and months prior to the days of the site inspection are provided in Attachment 3. Selected photos of vegetation, soil, and hydrology features, the terrain, and other features are provided in Attachment 4.

Methods

Wetland determinations and boundary mapping was performed at the property during the summer season of 2016, with the initial inspections done on June 22 and the last on September 19. (Specific dates are listed on the Data Forms). Determination of wetlands and the boundaries of wetlands with non-wetlands were made according to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (Version 2.0) dated September 2007 and the 1987 Corps of Engineers Wetland Delineation Manual.

The primary tasks for the work included: 1) a review of existing maps and ecological data, 2) collection of field data at observation points to determine the presence or absence of wetlands, and 3) field delineation of the boundaries separating wetlands and uplands.

Existing data that was reviewed as part of this work included, USGS Topographic Maps, Municipality of Anchorage Wetland Atlas data, National Wetlands Inventory (NWI) data, and Natural Resource Conservation Service's *Soil Survey of Anchorage, Alaska*.

The methodology used for delineating wetlands is known as the triple parameter approach as described in the Alaska Regional Supplement. The premise of this approach is that the three essential characteristics of wetlands: hydrophytic (a term meaning *water-loving*) vegetation, hydric soils, and wetland hydrology must all be present to have a positive wetland determination. These methods were used to achieve accurate characterization of the wetland community at specific observation points and to correlate the findings with existing aerial imagery and ground conditions to identify boundary points in the field. The determination points were numbered sequentially (e.g., "DP-1") for tracking on wetland determination data forms published in the Alaska Regional Manual.

Soils were evaluated for hydric indicators by digging test pits and comparing the soil to the listed indicators provided in the Regional Guidance document. Soil colors were evaluated with a Munsell Soil Color Chart (Kollmogren, 1990).

Water must be present in order for wetlands to exist; however, it does not need to be present throughout the entire year. Wetland hydrology is considered to be present when there is permanent or periodic inundation or soil saturation for a significant period of time during the growing season, which is

specified as two weeks or more by Alaska Regional Guidance. Indicators of wetland hydrology include areas of ponding or soil saturation, evidence of previous water inundation such as dry algae on bare soil, watermarks on soils or leaves, and drainage patterns among others. Where positive indicators are observed, it is assumed that wetland hydrology occurs for a significant period of the growing season. Test pits were inspected to confirm the presence of indicators below ground surface (e.g., saturation, high water table).

Dominant plant species were characterized in an approximately 30-foot diameter circle centered at the soil pit. Within this circle, the total live aerial cover of each plant species was estimated visually. The vegetation cover of each species and its assigned wetland indicator status were used to calculate indices of hydrophytic vegetation as provided in the Wetland Data Forms. Plant species were identified using regional plant guides, including Collet (2002), Dickenson (1999), Hulten (1968), Johnson, et al. (1995), Pratt (1989), Tande and Lipkin (2003), Viereck and Little (1972), among others. Plant species names used on data forms followed the nomenclature of Lichvar (2012) which also provides the wetland indicator status of the plants.

Determination points (DPs) were flagged with a short piece of lime green flagging. The wetland boundary points were flagged in the field with pink flagging with a running "Wetland Delineation" printed in black letters and marked in the field with a unique identifier (e.g., A-1, B-2, etc.) and the GPS waypoint number. The geographic coordinates of wetland Determination Points, wetland boundaries, and other features were recorded in the field with a handheld GPS unit.

Findings

Potential jurisdictional wetlands were found within the property as determined by a detailed evaluation of vegetation, soils, and hydrology at established determination points and supported with observations throughout the area. Table 1 summarizes the results of determination point data for the three parcels. Tables 2 and 3 summarize the wetland polygons and other aquatic features identified on the property. The figures in Attachment 1 include GIS maps produced from field data to display the wetland boundaries and the location of determination points. The aerial imagery base, 5-ft contours, and hillshade GIS files were provided by the MOA.

Inspection of the property occurred during the normal growing season in southcentral Alaska. The majority of the dominant vegetation occurring at the site is perennial and visible plant structures including leaves and stems allowed for identification.

The local precipitation patterns were consulted (NWS, 2016) to determine if hydrology indicators observed at the site at were representative of normal conditions for the specific day the site inspection had occurred. This investigation spanned several months of data collection and observations over a normal, climatic change from very dry conditions in June to increasing precipitation through September. The climatic reports for each day of an inspection corresponding to a data form is included in Attachment 3. Generally, the growing season of 2016 began with relatively dry conditions through early

June, then precipitation accumulated slightly above normal through the summer, accumulating to nearly 20 percent above normal on the day of the last inspection, September 19, 2016. Some of the early inspections in mid-June found very dry conditions in the soil, despite rainfall in the days prior. This is likely due to a delayed effect of precipitation taking some time to absorb into the soil then vegetation taking it up quickly. Re-inspection of certain sites later during the growing season provided supplemental data to consider for evaluating soil saturation and other wetland hydrology parameters. The presence of hydrogen sulfide was important at certain sites where saturation was not clearly present at the time of inspection.

A total of five separate and contiguous wetland polygons were mapped at the property and are designated as “Wetland #1” through “Wetland #5” in Table 2 and selected figures. Other waters noted to occur on the parcels include several headwater branches of Little Rabbit Creek, as listed in Table 3.

The area delineated as Wetland #1 consists of dense black spruce forest with saturated and dark-colored organic soils. This habitat is a part of similar black spruce forest that extends to the south and west.



Wetland #1 at DP-1, dominated by black spruce (*Picea mariana* FACW).

The area identified as Wetland #2 occupies the central area of the west parcel and includes a variety of wetland habitats ranging from treeless, open emergent wetland in the central part and forested wetlands along the margins. Soils range from deep deposits of peat and muck in area of emergent vegetation and mineral soils with depletions and/or redoximorphic features found in the forested and shrub-scrub habitats on the margins of this wetland area. The hydrology of this area varies as well, with the central part of emergent vegetation likely flooded during spring break up and during late-season

rainfall events. Soils were saturated at the surface in the low-lying areas of the emergent vegetation during late June, the driest part of the growing season locally. The marginal areas of this wetland complex are dominated by stunted black spruce and alder (*Alnus viridis* FAC and *Alnus tenuifolia* FAC). Shrubby cinquefoil (*Dasiphora fruticosa* FAC) was found to be a reliable indicator of hydric soils in the marginal areas of this wetland complex, particularly in the south side where large black and white spruce trees intermingle with predominantly FAC understory.



Sedge meadow in central area of Wetland #2 at DP-19.

The outer margins of Wetland #2 are nearly indistinguishable from the adjacent upland white spruce-birch forest as the determining factor with respect to wetland conditions is the presence of hydric soil. The presence of hydrogen sulfide was used to identify hydric soil and wetland hydrology at several locations at the perimeter of Wetland #2, likely a result of the normally dry conditions during the inspections of these sites, which occurred mostly in late June and early July.

The north side of Wetland #2 abuts a steep mountain slope and results in a clearly defined boundary between wetland and upland, with a noticeable topographic break of a foot or more where the boundary points were established. Healthy black spruce in these areas was found to intermingle with white spruce (*Picea glauca* FACU) and were often difficult to distinguish between the two species as the black spruce exhibit morphological characters similar to white spruce in these areas.



Wetland #2 at DP-18, forested and shrub-scrub habitat.

The steep topographic break along the north side of Wetland #2 is also the location of seeps or springs where groundwater emerges and forms small ponds and streams that flow to the south into the wetland complex. These seeps are particularly rich in wetland flora, with unique wetland species such as orchids (*Spiranthes romanzoffiana* OBL; Hooded Ladies'-Tresses) and cotton-grass (*Eriophorum gracile* OBL) locally abundant. The small pools of water that accumulate at the seeps are frequented by moose and other wildlife as indicated by abundant track and scat at these sites. Moose may contribute to the development of ponds and streams in these areas as the soft mucky soils get tracked by these animals creating new water channels and depressions.

The east side of Wetland #2 extends nearly to Heights Hill Rd. Wetland conditions become less detectable near the roadway where grading and ditching for the roadway in the past has likely altered the hydrology conditions, resulting in dewatering and aeration of soils within approximately 250 west of the roadway. Logging and clearing of vegetation within approximately 100 west of the roadway may have also contributed to the loss of wetland conditions. The vegetation in this cleared area is dominated by FAC and FACU species that have colonized the area, resulting in non-hydrophytic vegetation DP-69. Vegetation in the non-wetland forested west of the roadway is similar to the adjacent forested wetland areas, with the presence of soil saturation and hydric soil distinguishing the wetland status.

Wetland #3 is a flat area of mixed forest that includes black spruce and paper birch (*Betula papyrifera* FAC) trees, alder shrub, and emergent groundcover of mostly bluejoint reed grass (*Calamagrostis canadensis* FAC). Wetland hydrology and hydric soil were not consistently found in this area during the initial inspection during the dry season in June; later in September, soil saturation was confirmed in the area, although it was either very indistinct or slightly below the 12-inch depth criterion. Hydric soil was confirmed where the organic soils had lacked saturation earlier in the season. It is possible that this area has become less wet over the past decades due to climatic effects including warming that stimulates plant growth and water loss by evapotranspiration, among other factors.



Seep area along the north boundary of Wetland #2.

Wetland #4 is a band of mixed riparian wetland and upland that borders a branch of Little Rabbit Creek (LRC-20) that flows through the parcel. The south side of this wetland polygon was established by setting points, flagged in the field, that generally correspond to a steep topographic break at the creek. The north side of the boundary was established with a 25-ft buffer on the center of the stream channel as mapped by MOA stream layer (which was verified with field GPS points). The wetlands in these riparian areas are likely affected by stream flooding and shallow groundwater communication with the surface stream flow. The occurrence of wetland conditions varies along the narrow floodplain of the ravine the stream occupies, with an estimated half of the area meeting wetland criteria. The steep topography and thick brush along the creek were difficult to traverse and thus a bracketed boundary line was established. The area of mostly forested with poplar/cottonwood (*Populus balsamifera* FACU) and alder (*Alnus viridis* FAC). The understory vegetation is similar to much of the forested areas on the parcel, with field horsetail (*Equisetum arvense* FAC), bluejoint reed grass, and burnet (*Sanguisorba Canadensis* FACW). Soils are shallow, dark-colored and organic over mineral soils with redoximorphic features deep in the profile. Saturation and high water tables were present early in the season, suggesting that hydration is very likely during most of the growing season since flooding of the stream is expected to occur in the late summer and fall.

Wetland #5 is a single, contiguous area of aquatic habitat occupying the east parcel. There are a range of wetland types represented including forested, shrub-scrub, and emergent wetlands with varying hydrologic regimes ranging from seasonally saturated to seasonally flooded, with small, localized areas of semi-permanent inundation fed by springs.



Little Rabbit Creek (LRC-20) branch in Wetland #4 with adjacent riparian wetlands near DP-24.

The lowest elevation portions of Wetland #5 consist of the wet sedge meadows located in the central and west areas. The sedge meadows are dominated by *Carex utriculata* OBL (Northwest Territory sedge) but there are other graminoids and a variety of forbs in the groundcover. Mosses, particularly *Sphagnum* spp. are present in some areas although the inundation of the surface in dense sedge-dominated areas is free of moss. Shrubs are present including shrubby cinquefoil. Plants of special interest such as round-leaf sundew (*Drosera rotundifolia* OBL) and arrow grass (*Triglochin paulustris* OBL) are abundant locally in these wet sedge meadows.

The next higher-elevation habitat in Wetland #5 is shrub-scrub dominated by black spruce open forest and shrubs of mostly shrubby cinquefoil, sweet gale (*Myrica gale* OBL), and swamp birch (*Betula nana*), and mucky peat soils; this type is characterized by DP-56. Another habitat at a slightly higher elevation than the sedge meadows is an open forest of mature black spruce trees with an understory of alder and some FACU shrubs including rose (*Rosa acicularis* FACU), false azalea (*Menziesia ferruginea* FACU), and dwarf dogwood (*Cornus Canadensis* FACU); the understory is mostly of FACW herbs.

Wetland #5 extends up the mountain slope slightly in some areas where seeps and springs, or shallow groundwater creates wetland conditions. These areas often have paper birch trees present or dominant, which is not unusual for wetlands in the southcentral Alaska region. Alder and bluejoint reed grass are typical shrub and herb co-dominants, with low densities of sedges such as *Carex loliacea* OBL (ryegrass sedge) and FACW forbs including the ever-present burnet (*Sanguisorba canadensis*). Poplar trees are found in some of these toe-slope areas among the seeps. Some of these areas are nearly inaccessible due to the density of brush and the slope.



Sedge meadow in Wetland #5 at DP-55 with adjacent shrub-scrub and forested habitats.



***Drosera rotundifolia* OBL (Round-Leaf Sundew) in Wetland #5 at DP-55.**

A relatively large island of upland exists in the east part of Wetland #5, designated Upland #1. This area consists of dry, mineral soils that correspond to a Kichatna type soil rather than the Unit 426 Jacobsen-Disappear-Doroshin complex type soil mapped in the area by NRCS for this area. The representative data point for this upland area is DP-58, which is an open area of little tree cover, dominated by dwarf dogwood and bluejoint reed grass. The boundary of this upland area interfaces with forested and shrub-scrub

wetland areas on the south side (e.g., see F-8 through F-10) at a distinct topographic break. The other boundary areas between Upland #1 and Wetland #5 were less obvious from topographic features alone.

There are several stream segments that cross the parcel consisting of the headwater branches of Little Rabbit Creek (LRC). The stream segments were categorized as perennial or intermittent based on multiple observations taken over the growing season. The intermittent streams identified on the property were characterized as such due to the spatial discontinuity, i.e., breaks in the surface flow of these streams where flow apparently goes underground.

All the streams may be classified as upper perennial or headwater streams with vegetated shorelines (e.g., R3US5 by Cowardin system). The Alaska Department of Fish and Game does not indicate use by salmon in these streams; anadromous waters in Little Rabbit Creek extends from the mouth at Turnagain Arm to a few hundred yards upstream of Goldenview Drive, which is approximately one mile downstream.

All the wetlands identified on the property are believed to have groundwater connections with the adjacent stream channels and would convey storm water into these stream channels, which are tributaries of Little Rabbit Creek that flows into Cook Inlet, a Traditional Navigable Water.

Table 1. Summary of Determination Point Data

Location ID	Altitude Ft	Local Relief	Slope %	Vegetation hydrophytic	Wetland hydrology	Soil hydric	Wetland
DP-1	990	Flat	0	X	X	X	X
DP-2	998	Flat	0	X			
DP-3	996	Flat	0	X			
DP-4	987	Concave	10	X			
DP-5	1,003	Convex	5	X	X	X	X
DP-6	1,008	Concave	0	X	X	X	X
DP-7	991	Flat	5				
DP-8	985	Flat	5	X	X	X	X
DP-9	1,003	Flat	5	X	X	X	X
DP-10	1,015	Convex	20	X			
DP-11	968	Convex	10				
DP-12	976	Flat	0	X			
DP-13	965	Flat	10	X	X	X	X
DP-14	1,039	Convex	20	X			
DP-15	1,017	Convex	20				
DP-16	992	Convex	10	X			
DP-17	986	Concave	5	X	X	X	X
DP-18	990	Flat	1	X	X	X	X
DP-19	982	Flat	0	X	X	X	X
DP-20	1,029	Concave	10	X	X	X	X
DP-21	977	Convex	0	X			
DP-22	996	Flat	0	X	X	X	X
DP-23	1,025	Convex	10				
DP-24	1,007	Concave	0	X	X	X	X
DP-25	996	Concave	5	X			
DP-26	1,005	Concave	5	X	X	X	X
DP-27	1,040	Convex	10	X	X	X	X
DP-28	1,047	Convex	5	X	X	X	X
DP-29	990	Flat	5	X	X	X	X
DP-30	1,019	Flat	5				
DP-31	1,006	Flat	0	X	X	X	X
DP-32	983	Flat	5	X	X	X	X
DP-33	979	Convex	5	X			
DP-34	998	Convex	10	X			
DP-35	1,006	Convex	10	X			
DP-36	964	Convex	10	X			
DP-37	987	Convex	5				
DP-38	988	Convex	5	X	X	X	X
DP-39	978	Concave	5	X	X	X	X

Location ID	Altitude Ft	Local Relief	Slope %	Vegetation hydrophytic	Wetland hydrology	Soil hydric	Wetland
DP-40	1,016	Convex	10	X			
DP-41	1,067	Convex	10	X	X	X	X
DP-42	1,066	Convex	10	X	X	X	X
DP-43	1,043	Convex	10	X	X	X	X
DP-44	1,068	Convex	10	X			
DP-45	1,067	Concave	15	X	X	X	X
DP-46	1,207	Convex	5	X			
DP-47	1,212	Concave	15	X	X	X	X
DP-48	1,191	Concave	20	X	X	X	X
DP-49	1,202	Concave	20	X	X	X	X
DP-50	1,223	Convex	20				
DP-51	1,289	Convex	20	X			
DP-52	1,274	Concave	10	X	X	X	X
DP-53	1,257	Convex	20	X	X	X	X
DP-54	1,182	Convex	10	X	X	X	X
DP-55	1,122	Flat	5	X	X	X	X
DP-56	1,162	Flat	5	X	X	X	X
DP-57	1,172	Convex	5	X	X	X	X
DP-58	1,191	Convex	10	X			
DP-59	1,173	Convex	15	X	X	X	X
DP-60	1,196	Convex	10	X	X	X	X
DP-61	1,265	Convex	20	X	X	X	X
DP-62	1,322	Concave	5	X	X	X	X
DP-63	1,272	Concave	10	X	X	X	X
DP-64	1,258	Convex	10	X			
DP-65	1,159	Convex	5	X	X	X	X
DP-66	1,076	Convex	5	X	X	X	X
DP-67	1,120	Concave	10	X	X	X	X
DP-68	1,129	Concave	5	X	X	X	X
DP-69	1,084	Convex	10	X			
DP-70	1,036	Concave	10	X	X	X	X
DP-71	1,157	Concave	10	X	X	X	X
DP-72	1,166	Concave	15	X	X	X	X
DP-73	1,184	Convex	20	X	X	X	X
DP-74	1,206	Convex	15	X	X	X	X
DP-75	1,189	Convex	20	X	X	X	X
DP-76	1,209	Concave	10	X	X	X	X
DP-77	1,222	Concave	20	X	X	X	X
DP-78	1,144	Concave	10	X	X	X	X

X – Positive Determination Result

Table 2. Summary of Wetlands

Name	Cowardin Class (assigned)	Acres
Wetland #1	PFO4B	0.823
Wetland #2	PFO4/SS1/EM1B-C	48.174
Wetland #3	PFO4/SS1/EM1B	3.193
Wetland #4	PF04/SS1/EM1C	1.595
Wetland #5	PFO4/SS4/EM1B-C	54.067
Wetlands Total		107.851
Total Parcels		229.298
Percent Wetlands		47%

Table 3. Summary of Streams

Stream Type / Name	Map Label	MOA Reach	Cowardin Class	Lineal Feet
Perennial Streams				
Little Rabbit Creek (LRC)	LRC-00-05	LRC-00 05.00	R3US5	906
LRC Tributary	LRC-20-01	LRC-20 01.01	R3US5	3,065
LRC Tributary	LRC-20-07	No ID; "20-07"	R3US5	386
LRC Tributary	LRC-20-X-1	No ID	R3US5	2,644
LRC Tributary	LRC-20-X-2	LRC-20 02.01	R3US5	1,195
LRC Tributary	LRC-20-X-3	Not Mapped	R3US5	657
LRC Tributary	LRC-20-X-4	Not Mapped	R3US5	439
LRC Tributary	LRC-20-X-5	Not Mapped	R3US5	1,097
LRC Tributary	LRC-20-X-6	Not Mapped	R3US5	428
LRC Tributary	LRC-20-X-7	Not Mapped	R3US5	492
LRC Tributary	LRC-20-X-8	Not Mapped	R3US5	981
LRC Tributary	LRC-20-X-9	Not Mapped	R3US5	1,194
Perennial Total				13,484
Intermittent Streams				
LRC Tributary	LRC-20-X-10	Not Mapped	R3US5	661
LRC Tributary	LRC-20-X-11	Not Mapped	R3US5	723
LRC Tributary	LRC-20-X-12	Not Mapped	R3US5	160
Intermittent Total				1,544
Grand Total				15,028

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Figure 1



ANCHORAGE, ALASKA

Rabbit Creek Watershed (12-Digit HUC)

Investigation Site



Anchorage

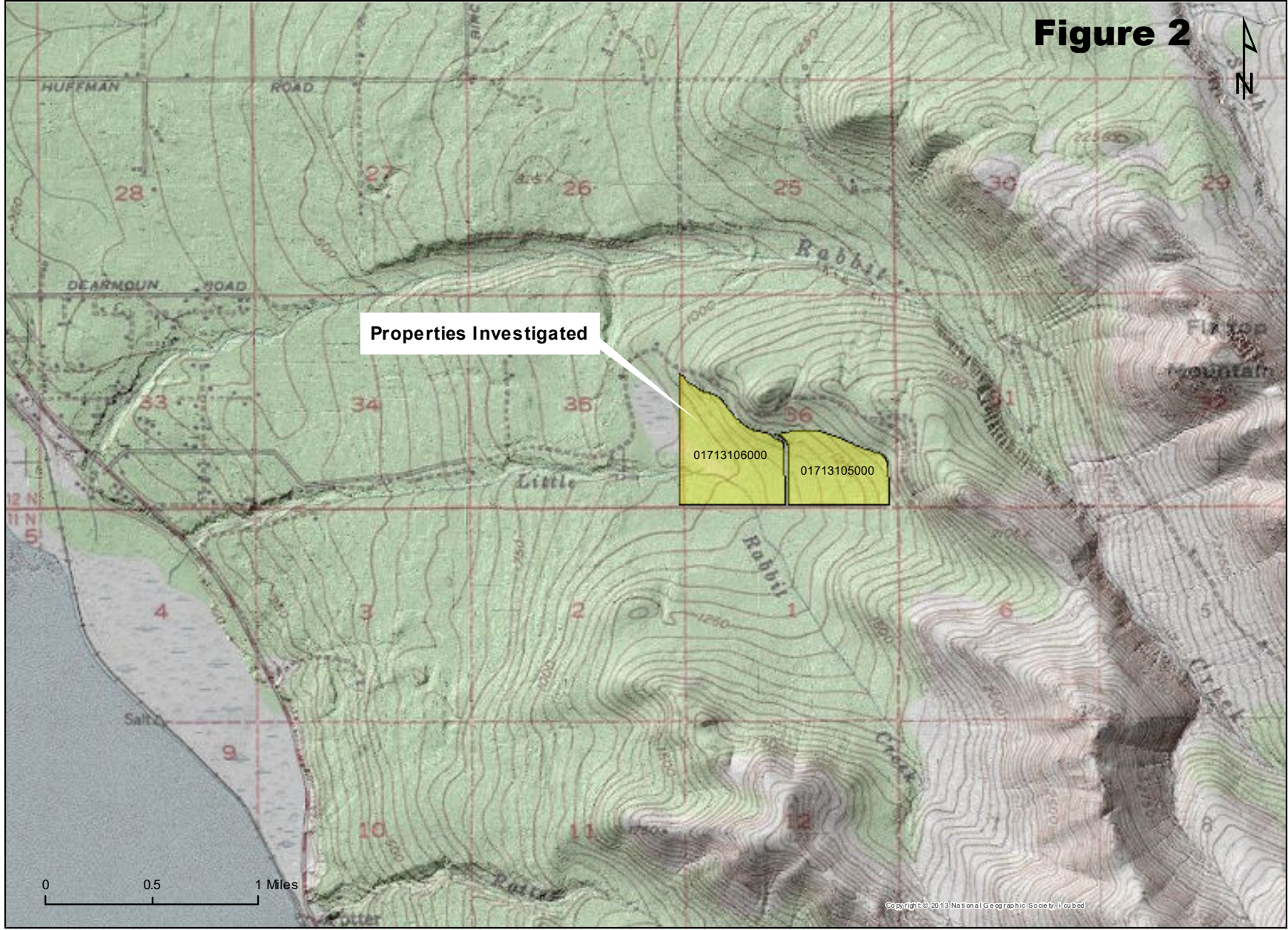
Legend

- RabbitCreekHUC12
- Streams
- Streets

0 1 2 Miles



Figure 2



Properties Investigated

01713106000

01713105000

0 0.5 1 Miles

Figure 3

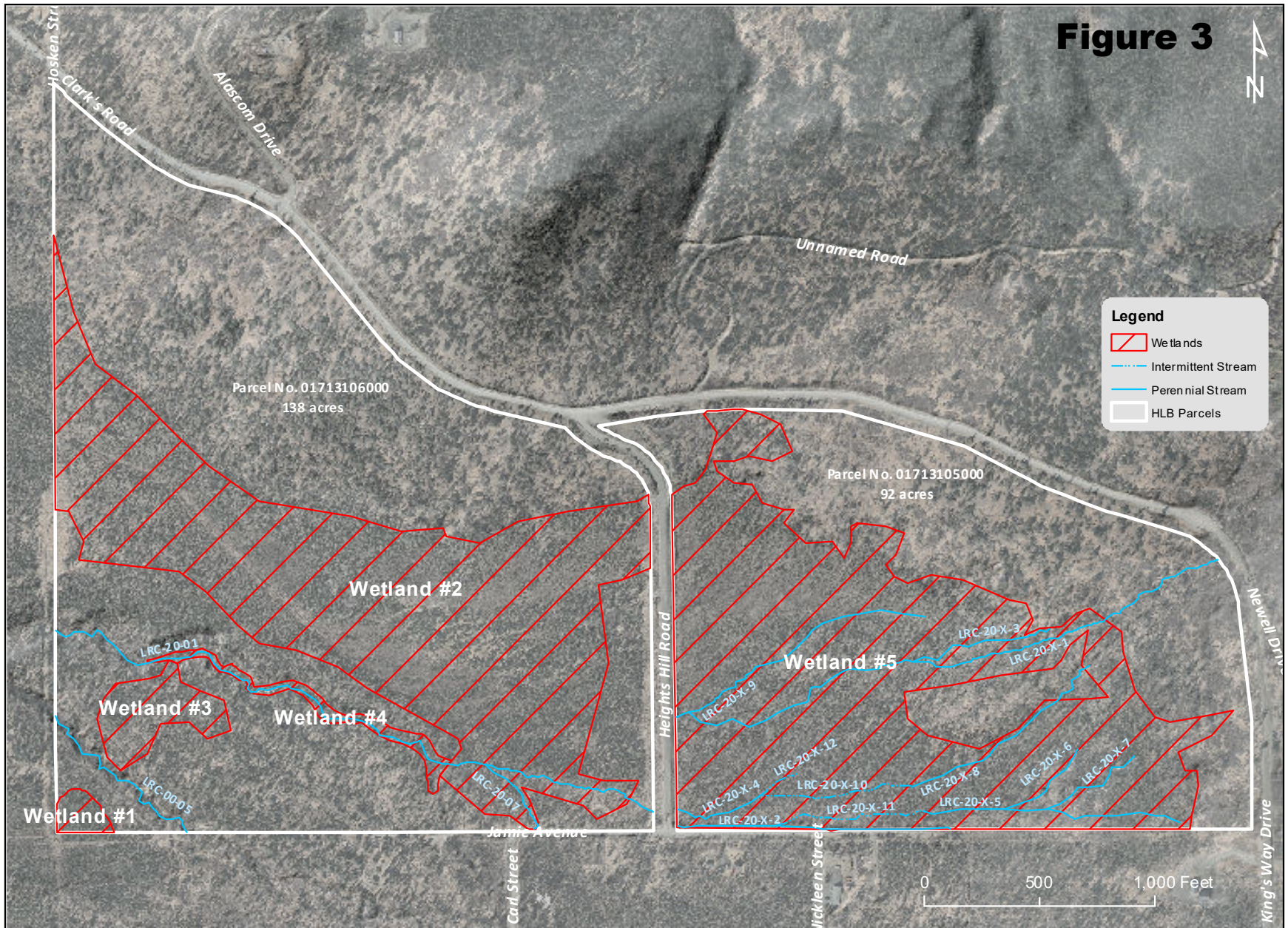


Figure 4



Legend

Field Points

- Wetland Boundary
- Determination Point

Habitats

- ▭ Intermittent Stream
- ▭ Perennial Stream

Subject Parcel

- ▭

MOA Wetlands Layer

- ▭

NRCS Soils Layer

- ▭

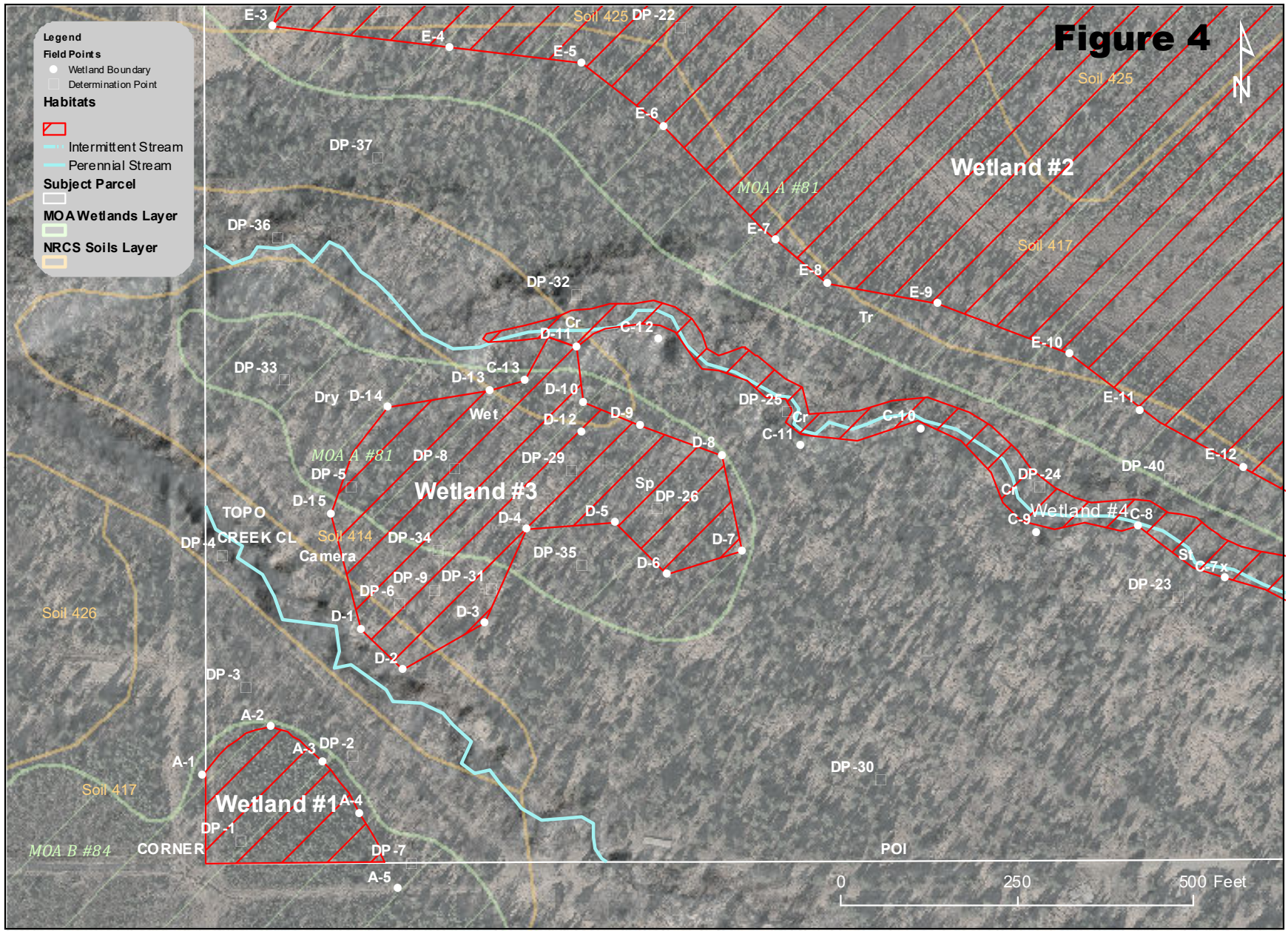


Figure 5



Legend

Field Points

- Wetland Boundary
- Determination Point

Habitats

- ▨ Intermittent Stream
- Perennial Stream

Subject Parcel

-

MOA Wetlands Layer

- ▨

NRCS Soils Layer

- ▨

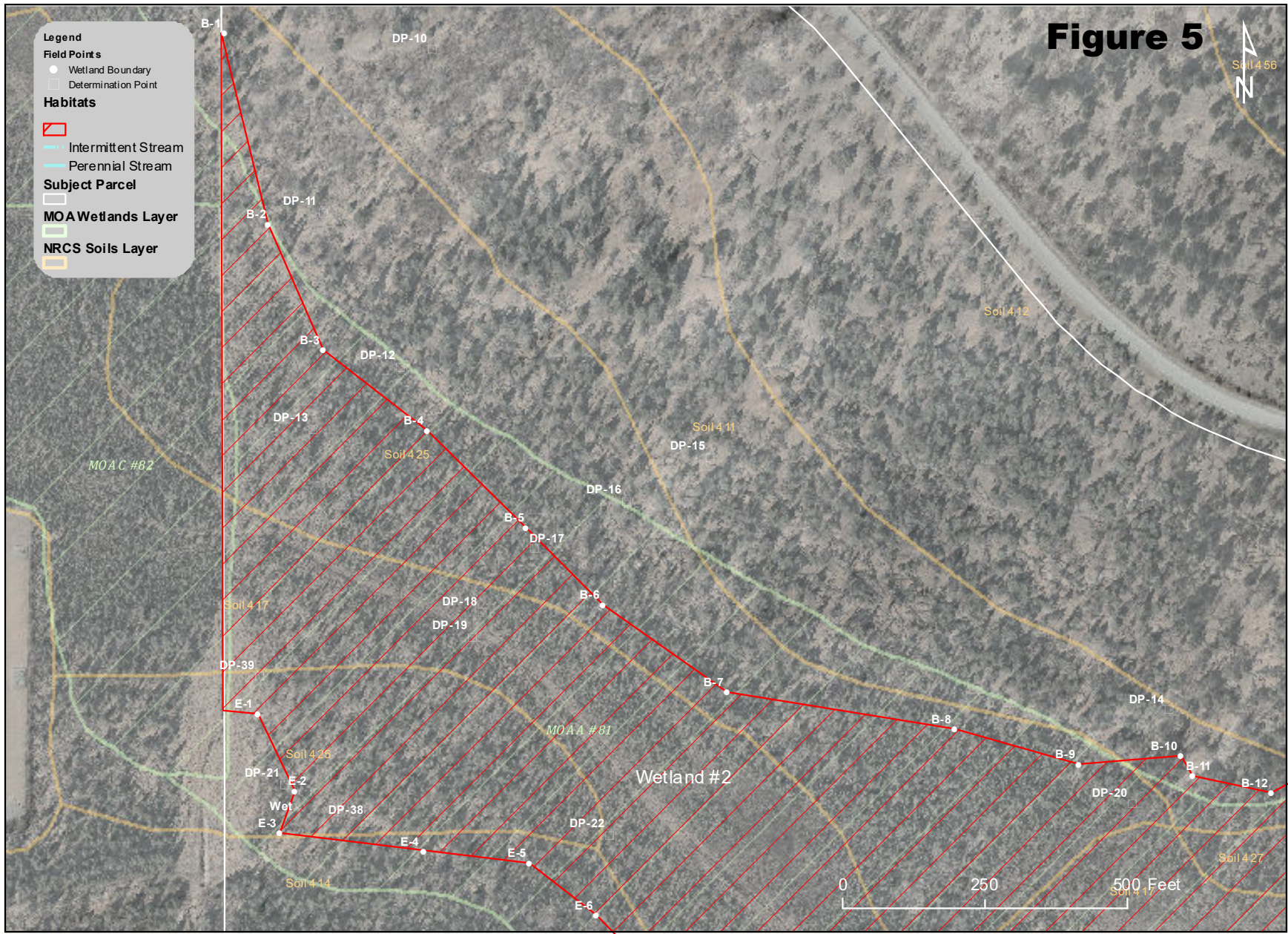


Figure 6

Legend

Field Points

- Wetland Boundary
- Determination Point

Habitats

- ▭ Intermittent Stream
- ▭ Perennial Stream

Subject Parcel

- ▭ MOA Wetlands Layer
- ▭ NRCS Soils Layer

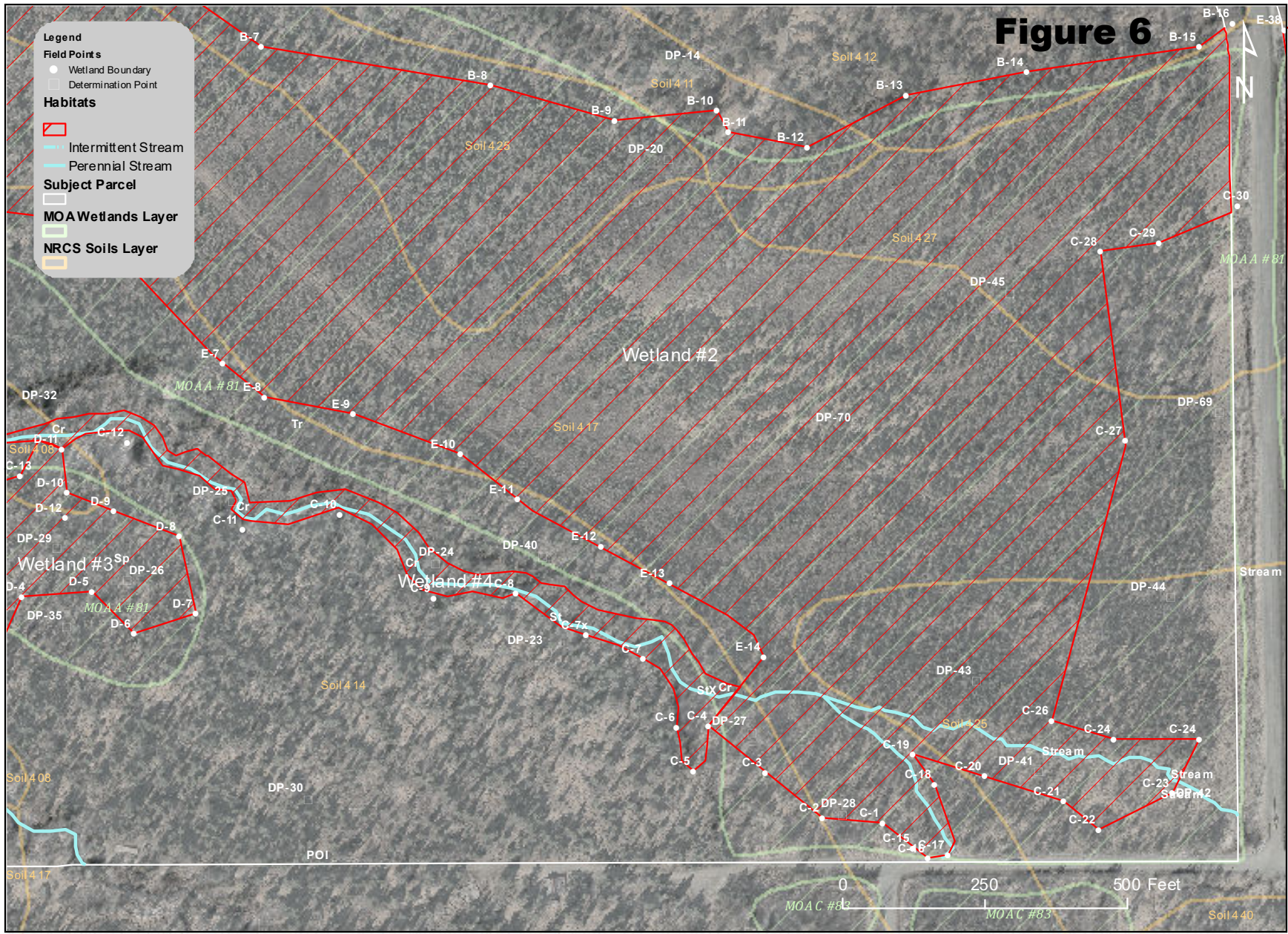


Figure 7



Legend

Field Points

- Wetland Boundary
- Determination Point

Habitats

- ▭ Intermittent Stream
- ▭ Perennial Stream

Subject Parcel

- ▭

MOA Wetlands Layer

- ▭

NRCS Soils Layer

- ▭

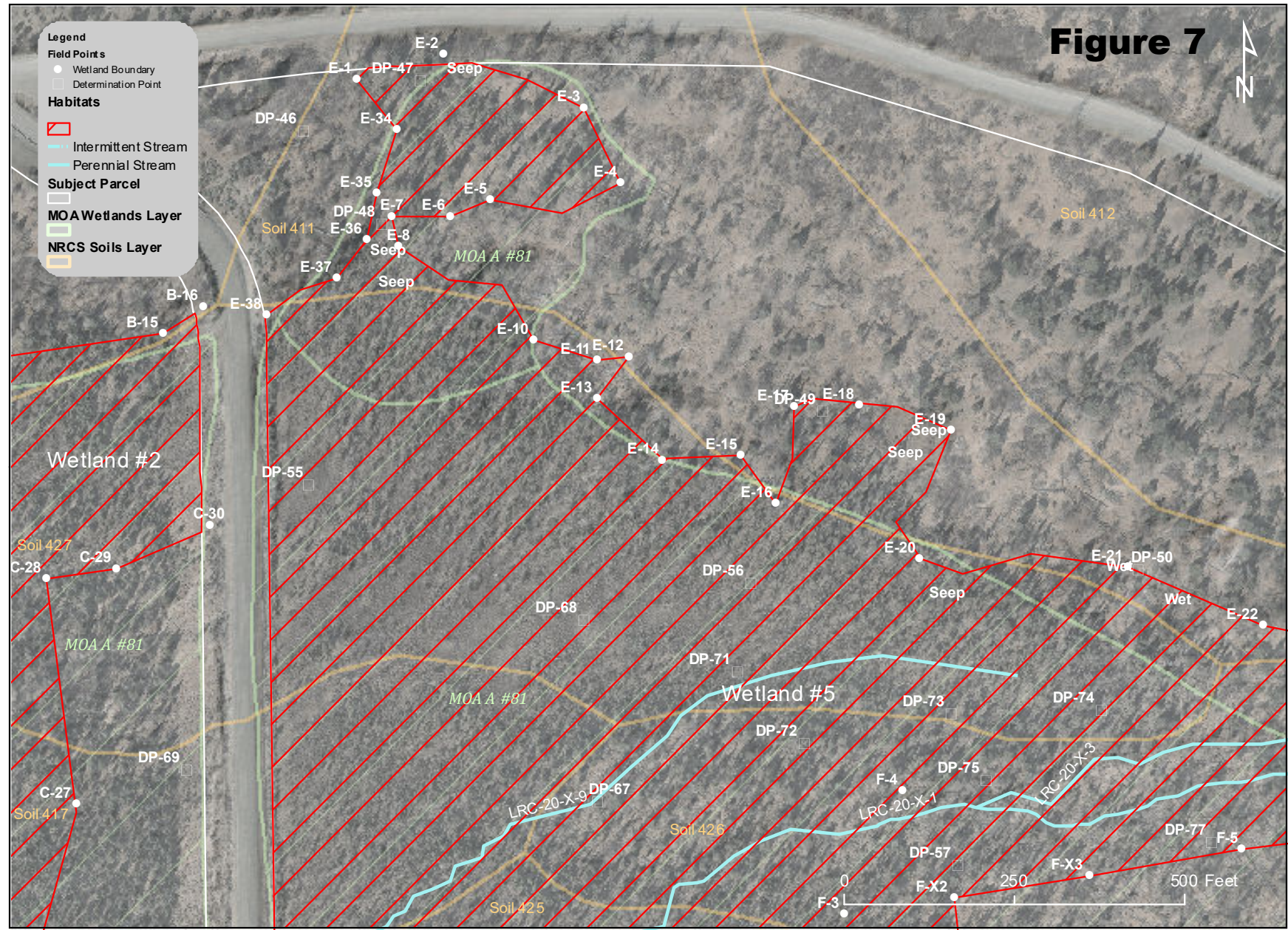


Figure 8



Legend

Field Points

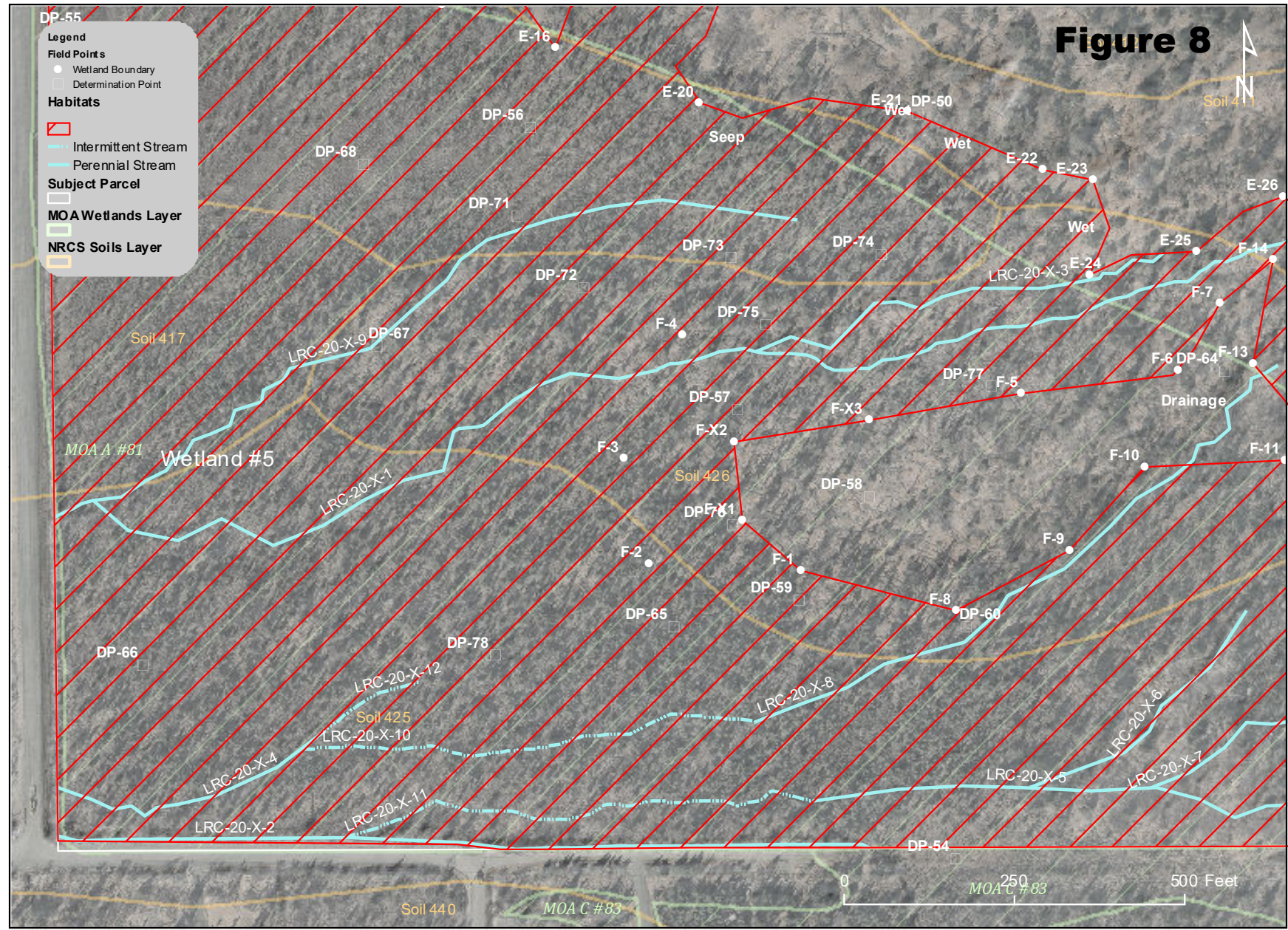
- Wetland Boundary
- Determination Point

Habitats

- ▭ Intermittent Stream
- ▭ Perennial Stream

Subject Parcel

- ▭ MOA Wetlands Layer
- ▭ NRCS Soils Layer



Wetland #5

MOA A #81

Soil 417

Soil 426

Soil 425

Soil 440

MOA C #83

Soil 411

0 250 500 Feet

MOA A #83

Figure 9 MOA P #0

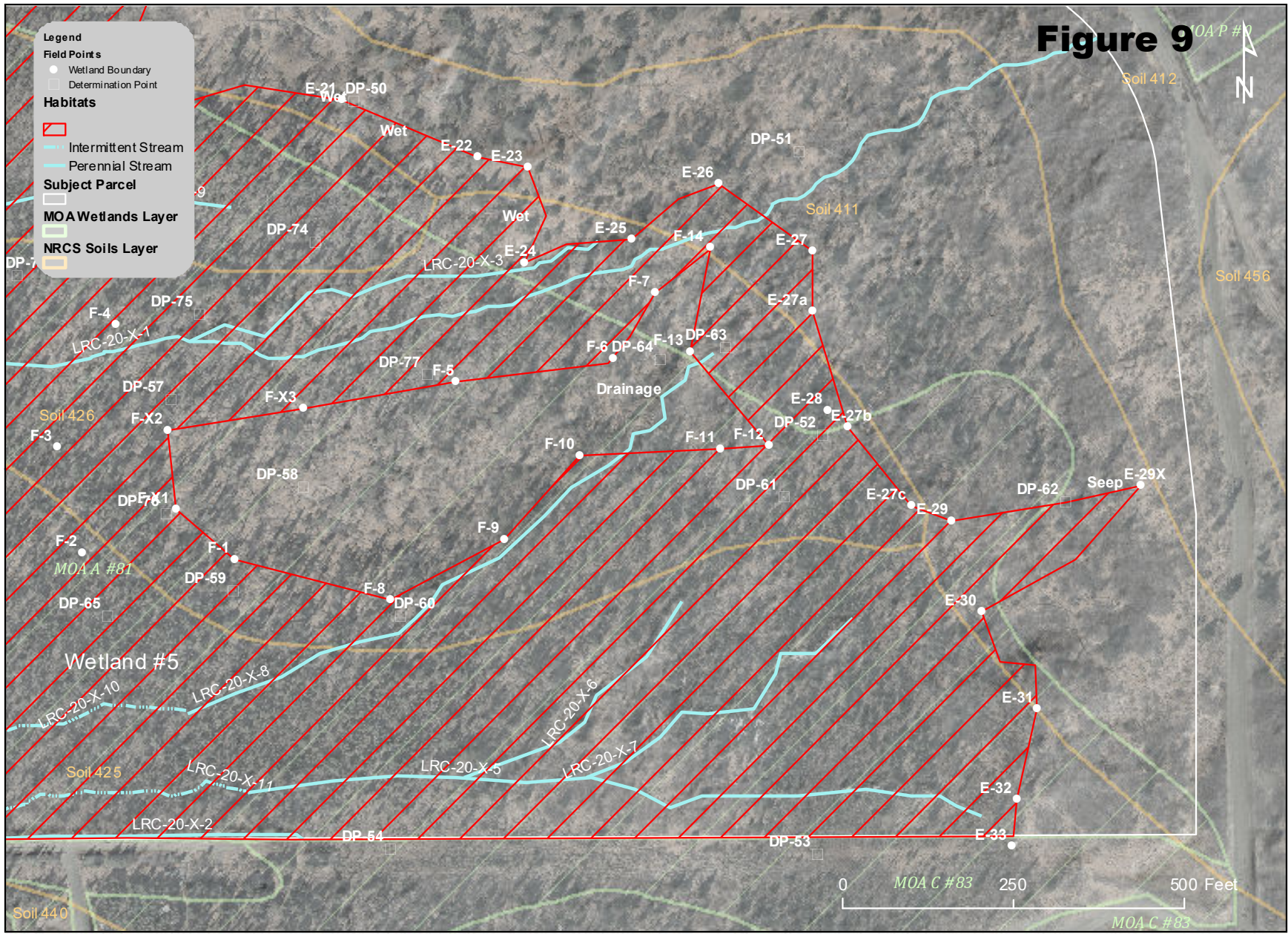
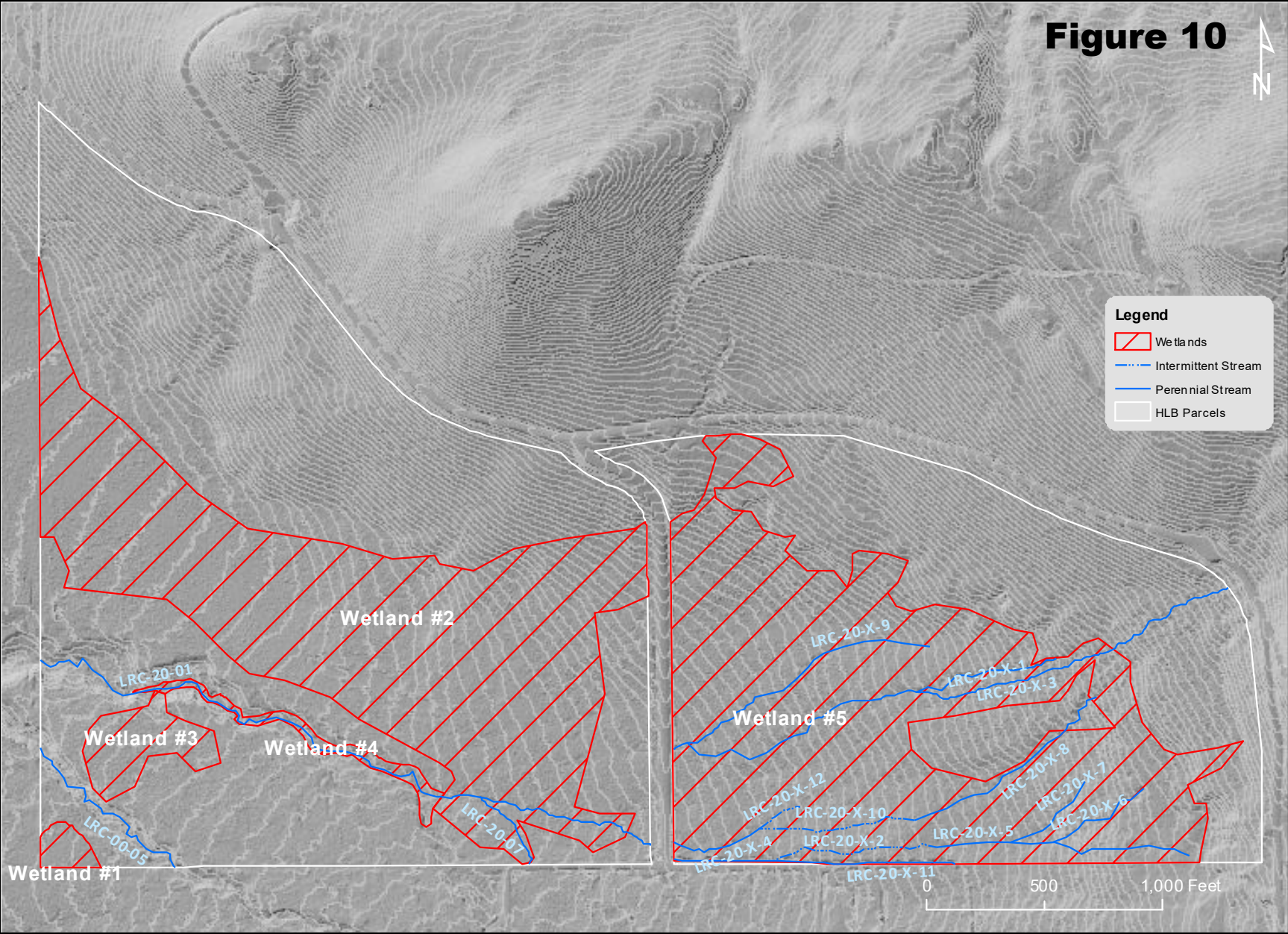


Figure 10

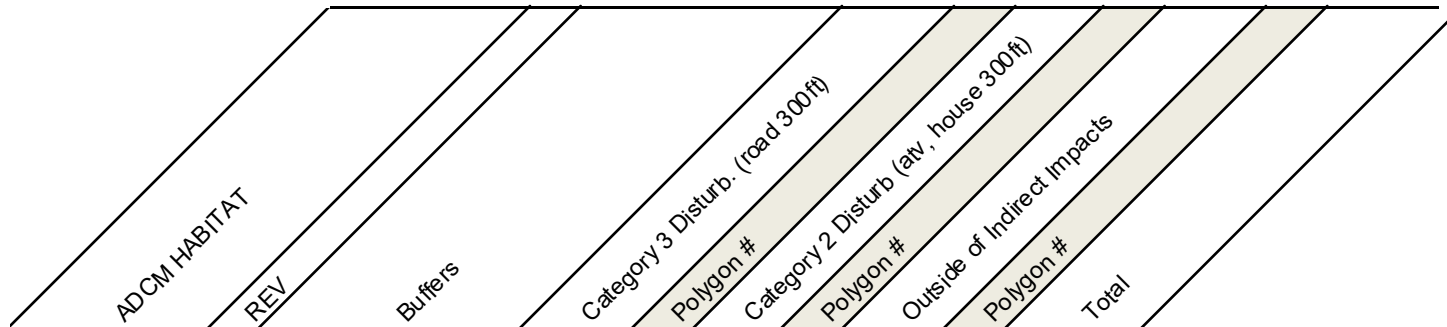


Attachment 2 – Credit Calculations
(Preliminary)

Spreadsheet 1: List of Polygons

Debit-Producing Project					
Project Name:		POA #:		Date:	
Applicant:		Watershed:		Prepared by:	
Sheet/Figure # Depicting Polygon #'s (list by sheet, if more than one):					
Credit-Producing Project					
Project Name:	Heritage Land Bank Mitigation Bank Section 36 Mitigation Site	POA #:	POA-2009-874	Date:	3/16/2018
Proponent:	Heritage Land Bank (HLB), Municipality of Anchorage Real Estate Department	Watershed:	Rabbit Creek-Frontal Turnagain Arm 1902040107	Prepared by:	Pat Athey
Sheet/Figure # Depicting Polygon #'s (list by sheet, if more than one):					

S.	T.	U.	V.	W.	X.	Y.	Z.	
Landform	REV	Polygon ID	Polygon Description	Dominant Indirect Impacts Factor	Size Factor	Aggregate Indirect Impacts Factor (Col W ^{col X})	Polygon Size	
Wetlands	1	1	inundated through June: >2500sf: natural or naturalized	0.90	1	0.90	1.85 ac	
		2	inundated through June: >2500sf: natural or naturalized	0.90	1	0.90	0.14 ac	
		3	inundated through June: >2500sf: natural or naturalized	0.90	1	0.90	1.94 ac	
		27	inundated through June: >2500sf: natural or naturalized	1.00	1	1.00	1.81 ac	
		28	inundated through June: >2500sf: natural or naturalized	1.00	1	1.00	1.17 ac	
	2	4	rarely or never inundated: 300' buffer for REV 1 or 2 aquatic area	0.90	1	0.90	2.82 ac	
		5	rarely or never inundated: setback for REV 2 waterway or waterbody	0.90	1	0.90	3.12 ac	
		16	rarely or never inundated: 300' buffer for REV 1 or 2 aquatic area	0.95	1	0.95	1.35 ac	
		17	inundated in spring or autumn: >2500sf: natural or naturalized	0.95	1	0.95	1.27 ac	
		29	rarely or never inundated: 300' buffer for REV 1 or 2 aquatic area	1.00	1	1.00	2.02 ac	
		30	rarely or never inundated: setback for REV 2 waterway or waterbody	1.00	1	1.00	1.80 ac	
		31	inundated in spring or autumn: >2500sf: natural or naturalized	1.00	1	1.00	2.54 ac	
		6	rarely or never inundated: 300' buffer for REV 1 or 2 aquatic area	0.90	1	0.90	8.00 ac	
		7	rarely or never inundated: setback for REV 2 waterway or waterbody	0.90	1	0.90	4.48 ac	
		18	rarely or never inundated: 300' buffer for REV 1 or 2 aquatic area	0.95	1	0.95	2.90 ac	
		19	rarely or never inundated: setback for REV 2 waterway or waterbody	0.95	1	0.95	0.50 ac	
		32	rarely or never inundated: 300' buffer for REV 1 or 2 aquatic area	1.00	1	1.00	24.16 ac	
		33	rarely or never inundated: setback for REV 2 waterway or waterbody	1.00	1	1.00	6.04 ac	
	3	8	rarely or never inundated: other: natural or naturalized	0.90	1	0.90	6.62 ac	
		9	rarely or never inundated: setback for REV 3 waterway or waterbody	0.90	1	0.90	0.55 ac	
		20	rarely or never inundated: other: natural or naturalized	0.95	1	0.95	4.97 ac	
		21	rarely or never inundated: setback for REV 3 waterway or waterbody	0.95	1	0.95	0.07 ac	
		34	rarely or never inundated: other: natural or naturalized	1.00	1	1.00	26.83 ac	
		35	rarely or never inundated: setback for REV 3 waterway or waterbody	1.00	1	1.00	0.87 ac	
	4							
	S.	T.	U.	V.	W.	X.	Y.	Z.
	Landform	REV	Polygon ID	Polygon Description	Dominant Indirect Impacts Factor	Size Factor	Aggregate Indirect Impacts Factor (Col W ^{col X})	Polygon Size
	Uplands	2	1					
			10	not developed: buffer	0.90	1	0.90	13.23 ac
			11	not developed: setback for REV 2 waterway or waterbody	0.90	1	0.90	4.18 ac
			22	not developed: buffer	0.95	1	0.95	3.60 ac
			23	not developed: setback for REV 2 waterway or waterbody	0.95	1	0.95	2.75 ac
			36	not developed: buffer	1.00	1	1.00	15.98 ac
			37	not developed: setback for REV 2 waterway or waterbody	1.00	1	1.00	5.96 ac
		3	12	not developed: other: natural or naturalized	1.00	1	1.00	15.67 ac
13			not developed: other: natural or naturalized	1.00	1	1.00	21.01 ac	
14			not developed: setback for REV 3 waterway or waterbody	1.00	1	1.00	2.55 ac	
24			not developed: other: natural or naturalized	1.00	1	1.00	0.20 ac	
25			not developed: other: natural or naturalized	1.00	1	1.00	0.49 ac	
26			not developed: setback for REV 3 waterway or waterbody	1.00	1	1.00	0.07 ac	
38			not developed: setback for REV 3 waterway or waterbody	1.00	1	1.00	24.12 ac	
39		not developed: setback for REV 3 waterway or waterbody	1.00	1	1.00	1.15 ac		
40		not developed: setback for REV 3 waterway or waterbody	1.00	1	1.00	1.15 ac		
4								



INDIRECT IMPACT FACTOR			0.90		0.95		1.00		
InundThrJune	1	Streams 300ft	1.85	1			1.81	27	3.66
InundThrJune	1	Stream Setback 85ft	0.14	2					0.14
InundThrJune	1	Out	1.94	3			1.17	28	3.11
InundSpringFall	2	Streams 300ft	2.82	4	1.35	16	2.02	29	6.19
InundSpringFall	2	Stream Setback 85ft	3.12	5			1.80	30	4.92
InundSpringFall	2	Out			1.27	17	2.54	31	3.81
InundRare	2	Streams 300ft	8.00	6	2.90	18	24.16	32	35.06
InundRare	2	Stream Setback 85ft	4.48	7	0.50	19	6.04	33	11.03
InundRare	3	Out	6.62	8	4.97	20	26.83	34	38.42
InundRare	3	Draingeway Setback 25	0.55	9	0.07	21	0.87	35	1.49
Upland_Natural	2	Streams 300ft	13.23	10	3.60	22	15.98	36	32.82
Upland_Natural	2	Stream Setback 85ft	4.18	11	2.75	23	5.96	37	12.89
Upland_Natural	3	Wetlands 300ft	15.67	12	0.20	24	24.12	38	39.98
Upland_Natural	3	Out	21.01	13	0.49	25	10.03	39	31.53
Upland_Natural	3	Draingeway Setback 25	2.55	14	0.07	26	1.15	40	3.77
Upland_Develope	4	Wetlands 300ft	0.19	15					0.19
Grand Total			86.35		18.17		124.83		229.35

Spreadsheet 5: Credits for Preservation

Project Name:	Heritage Land Bank Mitigation Bank Section 36 Mitigation Site	POA #:	POA-2009-874	Watershed:	Rabbit Creek-Frontal Turnagain Arm 1902040107	Date:	3/16/2018
Project Proponent:	Heritage Land Bank (HLB), Municipality of Anchorage	Name of Waterway/Aquatic Area:		Little Rabbit Creek	Prepared by:	Pat Athey	
Project to which Credits Apply							
Project Name:		Applicant/Permittee:		POA #:			

P.	O.	R.	S.	T.	U.	V.	W.	X.	Y.	Z.	Note # (if nec)		
Landform	REV	Polygon Description	Regulatory Constraints Factor	Accessibility Factor	Threat (Col RxCols)	Credit Ratio	Aggregate Post-project Indirect Impacts Factor	ID# (if nec)	Size	Credits [(Col Y/Col U) x Col W]			
Wetlands	1	inundated through June: >2500sf: natural or naturalized	3	1	3	1.5	0.90	1, 2, 3	3.93 ac	2.356			
		inundated through June: >2500sf: natural or naturalized	3	2	6	2.0	1.00	27, 28	2.97 ac	1.487			
	REV 1 Sub-totals									6.90 ac	3.844		
	2	rarely or never inundated: setback for REV 2 waterway or waterbody	3	2	6	3.5	0.90	4, 5	18.43 ac	4.738			
		rarely or never inundated: setback for REV 2 waterway or waterbody	3	2	6	3.5	0.95	16, 17	6.02 ac	1.634			
		rarely or never inundated: setback for REV 2 waterway or waterbody	3	2	6	3.5	0.95	18, 19	3.40 ac	0.923			
		rarely or never inundated: setback for REV 2 waterway or waterbody	3	2	6	3.5	0.90	27, 28	36.56 ac	9.401			
		REV 2 Sub-totals									64.41 ac	16.696	
	3	rarely or never inundated; other: natural or naturalized	3	2	6	5.0	0.90	8, 9	7.16 ac	1.290			
		rarely or never inundated; other: natural or naturalized	3	2	6	5.0	0.95	20, 21	5.04 ac	0.958			
		rarely or never inundated; other: natural or naturalized	3	2	6	5.0	0.90	34, 35	27.70 ac	4.987			
	REV 3 Sub-totals									39.91 ac	7.234		
	4	REV 4 Sub-totals									0.00 ac	0.000	
	REV 4 Sub-totals									0.00 ac	0.000		
	Uplands	1					0						
			REV 1 Sub-totals									0.00 ac	0.000
not developed: buffer			1	2	2	2.0	0.90	8, 9	17.41 ac	7.834			
not developed: buffer			1	2	2	2.0	0.95	22, 23	6.35 ac	3.017			
not developed: buffer		1	2	2	2.0	0.90	36, 37	21.94 ac	9.875				
REV 2 Sub-totals									45.71 ac	20.726			
3		not developed: other: natural or naturalized	1	2	2	2.75	1.00	12, 13, 14, 24, 25, 26	66.40 ac	24.147			
REV 3 Sub-totals									66.40 ac	24.147			
REV 4 Sub-totals									0.00 ac	0.000			
REV 4 Sub-totals									0.00 ac	0.000			
Waterways	1					0							
	REV 1 Sub-totals									0 sf	0.000		
	2					0							
	REV 2 Sub-totals									0 sf	0.000		
3						0							
REV 3 Sub-totals									0 sf	0.000			
4						0							
REV 4 Sub-totals									0 sf	0.000			
Total Preservation Credits										72.65			

0.00

223.33

Notes:

Spreadsheet 6: Project Debit-Credit Summary

Debit-Producing Project								
Name of Project:							Watershed:	
Applicant:							POA #:	
Prepared by:							Date:	
Size of Direct Impacts:	Waterways	Subtidal Zone	Intertidal Zone	Waterbodies	Wetlands	Uplands	Total Non-waterways	
							0.00 ac	
Credit-Producing Project								
Name of Project:	Heritage Land Bank Mitigation Bank Section 36 Mitigation Site				Watershed:	Rabbit Creek-Frontal Turnagain Arm 1902040107		
Proponent:	Heritage Land Bank (HLB), Municipality of Anchorage Real Estate Department				POA #:	POA-2009-874		
Prepared by:	Pat Athey				Date:	3/16/2018		
Project to which Credits Apply:								
Project Name:							POA #:	
Applicant/Permittee:								
Size of...	Waterways	Subtidal Zone	Intertidal Zone	Waterbodies	Wetlands	Uplands	Total Non-waterways	
Restored Area:						N/A	0.00 ac	
Enhanced Area:							0.00 ac	
Established Area:						N/A	0.00 ac	
Preserved Area:					111.22 ac	112.11 ac	223.33 ac	
Credits Area:	0 sf	0.00 ac	0.00 ac	0.00 ac	111.22 ac	112.11 ac	223.33 ac	

Project Debits Summary							
S.	Number of Debits per Landform						Z. Total Debits (T+U+V+W+X+Y)
	T. Subtidal Zone	U. Intertidal Zone	V. Waterways	W. Waterbodies	X. Wetlands	Y. Uplands	
REV							
1	N/A						0.00
2							0.00
3		N/A					0.00
4	N/A	N/A					0.00
Totals	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Project Credits Summary								
R.	S.	Number of Credits per Landform						Z. Total Credits (T+U+V+W+X+Y)
		T. Subtidal Zone	U. Intertidal Zone	V. Waterways	W. Waterbodies	X. Wetlands	Y. Uplands	
Type of Project	REV							
Restoration	1	N/A					N/A	0.00
	2						N/A	0.00
	3		N/A				N/A	0.00
Enhancement	1	N/A						0.00
	2							0.00
	3		N/A					0.00
	4	N/A	N/A			N/A	N/A	0.00
Establishment	1	N/A					N/A	0.00
	2						N/A	0.00
	3		N/A				N/A	0.00
Preservation	1	N/A				3.84		3.84
	2					16.70	20.73	37.42
	3		N/A			7.23	24.15	31.38
	4	N/A	N/A					0.00
Totals		0.00	0.00	0.00	0.00	27.77	44.87	72.65

Project Debit-Credit Balance										
Q.	R.	Number of Credits by Project Type						X. Total (S+T+U+V)	Y. Net (W-R) ¹	Z. Redistribution of Excess Credits ²
		S.	T.	U.	V.	W.	Net (X-Y) ¹			
REV	Debits	Restoration	Enhancement	Establishment	Preservation					
1	0.00	0.00	0.00	0.00	3.84	3.84	3.84			
2	0.00	0.00	0.00	0.00	37.42	37.42	37.42			
3	0.00	0.00	0.00	0.00	31.38	31.38	31.38			
4	0.00	N/A	0.00	N/A	0.00	0.00	0.00			
Totals	0.00	0.00	0.00	0.00	72.65	72.65		0.00		0.00

¹Positive numbers represent net credits and negative numbers net debits.

²Credits offset debits on a one-to-one basis, regardless of REV (or cost).

Attachment 3 –Stream Rehabilitation & Culvert Design Information
(To Be Inserted After Evaluation, Design, and Approvals Are Completed)

Exhibit B.

Title Report for the Section 36 Mitigation Site



First American

Limited Liability Report

Limited Liability Report

ISSUED BY

First American Title Insurance Company

REPORT NUMBER

File No.: 0209-3012873

Ref No.: 017-131-05-000 and 017-131-06-000

To: Municipality Of Anchorage
Attn: John Bruns
4700 Elmore Road, 2nd Floor
Anchorage, AK 99507

Limitation of Liability for Informational Report

IMPORTANT - READ CAREFULLY: THIS REPORT IS NOT AN INSURED PRODUCT OR SERVICE OR A REPRESENTATION OF THE CONDITION OF TITLE TO REAL PROPERTY. IT IS NOT AN ABSTRACT, LEGAL OPINION, OPINION OF TITLE, TITLE INSURANCE COMMITMENT OR PRELIMINARY REPORT, OR ANY FORM OF TITLE INSURANCE OR GUARANTY. THIS REPORT IS ISSUED EXCLUSIVELY FOR THE BENEFIT OF THE APPLICANT THEREFOR, AND MAY NOT BE USED OR RELIED UPON BY ANY OTHER PERSON. THIS REPORT MAY NOT BE REPRODUCED IN ANY MANNER WITHOUT FIRST AMERICAN'S PRIOR WRITTEN CONSENT. FIRST AMERICAN DOES NOT REPRESENT OR WARRANT THAT THE INFORMATION HEREIN IS COMPLETE OR FREE FROM ERROR, AND THE INFORMATION HEREIN IS PROVIDED WITHOUT ANY WARRANTIES OF ANY KIND, AS-IS, AND WITH ALL FAULTS. AS A MATERIAL PART OF THE CONSIDERATION GIVEN IN EXCHANGE FOR THE ISSUANCE OF THIS REPORT, RECIPIENT AGREES THAT FIRST AMERICAN'S SOLE LIABILITY FOR ANY LOSS OR DAMAGE CAUSED BY AN ERROR OR OMISSION DUE TO INACCURATE INFORMATION OR NEGLIGENCE IN PREPARING THIS REPORT SHALL BE LIMITED TO THE FEE CHARGED FOR THE REPORT. RECIPIENT ACCEPTS THIS REPORT WITH THIS LIMITATION AND AGREES THAT FIRST AMERICAN WOULD NOT HAVE ISSUED THIS REPORT BUT FOR THE LIMITATION OF LIABILITY DESCRIBED ABOVE. FIRST AMERICAN MAKES NO REPRESENTATION OR WARRANTY AS TO THE LEGALITY OR PROPRIETY OF RECIPIENT'S USE OF THE INFORMATION HEREIN.

Effective Date: February 21, 2018 at 8:00 am

Fee: \$255.00

Title is vested in:

Municipality of Anchorage

The land referred to in this Report is situated in the State of Alaska and is described as follows:

Tracts 1 and 5, SECTION 36 SUBDIVISION, according to the official plat thereof, filed under Plat Number 2008-100, Records of the Anchorage Recording District, Third Judicial District, State of Alaska.

The title to the herein described land is subject to the matters shown as exceptions herein, which exceptions are not necessarily shown in order of their priority.

EXCEPTIONS

1. Reservations or exceptions in patents or in acts authorizing the issuance thereof.
2. Taxes and/or Assessments, if any, due The Municipality of Anchorage.
3. Reservation of oil, gas and mineral rights as reserved in an instrument
Recorded: Janaury 6, 1989
Recording Information: Book 1842 Page 452

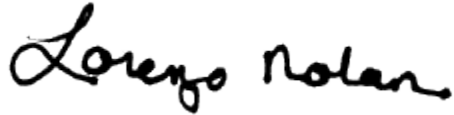
Note: Title to the mineral estate, as it pertains to said property , has not been further searched and no insurance is provided under this policy.

4. Easements as dedicated and shown on the plat of said subdivision. (Copy attached)
5. The effect of the notes which appear on the plat of said subdivision. (Copy attached)
6. Slope easements as dedicated and reserved on the plat of said subdivision as follows;

"There shall be reserved adjacent to the dedicated streets shown hereon a slope reservation easement sufficient to contain cut and fill slopes of 1.5 feet horizontal for each 1 foot vertical (1.5 to 1) of cut or fill for the purpose of providing and maintaining the lateral support of the constructed streets. There is reserved to the grantors, their successors and assigns, the right to use such areas at any time upon providing and maintaining other adequate lateral support, as approved by the Municipality."

7. Reservation of section line easement 50 feet in width along each side of section line as provided by A.S. 19.10.010.
8. Rights of the public and of governmental bodies in and to that portion of the premises herein described lying below the high water mark of Little Rabbit Creek.
9. Any prohibition or limitation on the use, occupancy or improvements of the land resulting from the right of the public or riparian owners to use any waters which may cover the land or to use any portion of the land which is now or may formerly have been covered by water.

First American Title Insurance Company

A handwritten signature in black ink that reads "Lorenzo Nolan". The signature is written in a cursive, flowing style.

Lorenzo Nolan, Title Officer

NOTE: The attached plat, if any, is furnished solely for the purpose of assisting in locating the premises and does not purport to show all highways, roads or easements affecting the property. No reliance should be placed upon this plat for location or dimensions of the property and no liability is assumed for the correctness thereof.



First American

First American Title Insurance Company

3035 C Street

Anchorage, AK 99503

Phone: (907)561-1844 / Fax: (907)562-0540

PR: NWEST

Ofc: 0209 (3426)

Final Invoice

To: Municipality Of Anchorage
4700 Elmore Road, 2nd Floor
Anchorage, AK 99507

Invoice No.: 3426 - 20951425

Date: 02/26/2018

Our File No.: 0209-3012873

Title Officer: Lorenzo Nolan

Escrow Officer:

Customer ID: AK02965

Attention: John Bruns

Liability Amounts

Owners: \$255.00

Your Ref.: 017-131-05-000 and 017-131-06-000

Lenders:

RE: Property:
Tracts 1 and 5, Section 36 Subd., Anchorage, AK

Buyers:

Sellers: Municipality of Anchorage

Description of Charge	Invoice Amount
Report: Lien & Encumbrance	\$255.00

INVOICE TOTAL \$255.00

Comments:

Thank you for your business!

To assure proper credit, please send a copy of this Invoice and Payment to:

Attention: Accounts Receivable Department

PO Box 31001-2281

Pasadena, CA 91110-2281

Northern Property Tax Service, LLC

Phone: (907) 562-9794

Email: taxes@nptslc.com

Property Tax and Special Assessment Report

First American Title Insurance Company

File No.: **3012873B** Report Date: **February 20, 2018** Remarks:

Property Information

Legal: **Tract 5, Section 36**

Site: **N/A**

Lot Size: **6,052,096** Zone: **PLI-P** Year Built: **N/A** Plat No.: **08-100**

Tax Information

Tax Authority: Municipality of Anchorage	Tax Account: 017-131-06-000		
Land 2017: \$275,700	Building 2017: \$0	Exemption 2017: N/A	
Land 2018: \$0	Building 2018: \$0	Exemption 2018: Municipal	
Code Area: 21	Mil Rate: 15.940	Due Date: 6/15 & 8/15/17	
Year: 17	Levy: \$0.00	Balance: \$0.00	Del Balance: \$0.00

Assessment Information

<u>Type</u>	<u>Status</u>	<u>Unbilled Prin</u>	<u># Pymts</u>	<u>Due</u>	<u>Annual \$</u>	<u>Current Due</u>	<u>Del Balance</u>
Sewer Trunk	Not Available						
Sewer Lateral	Not Available						
Water	Not Available						
Roads	N/A						
Parks	N/A						
Gas	N/A						
Other	N/A						

Owner Title: **Municipality of Anchorage**

Owner Muni: **MOA / Heritage Land Bank**

In consideration of the fee paid for this report, the information is guaranteed as of the date of this report, subject to the accuracy of the information and balances provided by the applicable taxing authority.

By 

Northern Property Tax Service, LLC

Northern Property Tax Service, LLC

Phone: (907) 562-9794

Email: taxes@nptslc.com

Property Tax and Special Assessment Report

First American Title Insurance Company

File No.: **3012873A** Report Date: **February 20, 2018** Remarks:

Property Information

Legal: **Tract 1, Section 36**

Site: **N/A**

Lot Size: **4,046,201** Zone: **PLI-P** Year Built: **N/A** Plat No.: **08-100**

Tax Information

Tax Authority: Municipality of Anchorage	Tax Account: 017-131-05-000		
Land 2017: \$230,500	Building 2017: \$0	Exemption 2017: N/A	
Land 2018: \$0	Building 2018: \$0	Exemption 2018: Municipal	
Code Area: 56	Mil Rate: 12.030	Due Date: 6/15 & 8/15/17	
Year: 17	Levy: \$0.00	Balance: \$0.00	Del Balance: \$0.00

Assessment Information

<u>Type</u>	<u>Status</u>	<u>Unbilled Prin</u>	<u># Pymts</u>	<u>Due</u>	<u>Annual \$</u>	<u>Current Due</u>	<u>Del Balance</u>
Sewer Trunk	Not Available						
Sewer Lateral	Not Available						
Water	Not Available						
Roads	N/A						
Parks	N/A						
Gas	N/A						
Other	N/A						

Owner Title: **Municipality of Anchorage**

Owner Muni: **MOA / Heritage Land Bank**

In consideration of the fee paid for this report, the information is guaranteed as of the date of this report, subject to the accuracy of the information and balances provided by the applicable taxing authority.

By 

Northern Property Tax Service, LLC

Please Return to: *Dick Anthony*
Department of Public Works
Real Estate Services Division
P.O. Box 196650
Anchorage, AK 99519-6650

BK01842PG452

State of Alaska



Patent No. 10136

Know Ye By These Presents that the Grantor, the STATE OF ALASKA, pursuant to A.S. 29.65.010 - 130, and the regulations promulgated thereunder, in consideration of the sum of TEN AND NO/100 DOLLARS lawful money of the United States, and other good and valuable consideration, now paid, the receipt whereof is hereby acknowledged, hereby grants and conveys to the Grantee, the MUNICIPALITY OF ANCHORAGE, whose mailing address of record is P.O. Box 196650, Alaska 99519-6650, Grantee's successors and assigns, all that real property situated in the Anchorage Recording District, State of Alaska, and described as follows:

TOWNSHIP 12 NORTH, RANGE 3 WEST, SEWARD MERIDIAN

SECTION 36: N1/2N1/2.

CONTAINING 160 ACRES, MORE OR LESS.

ACCORDING TO THE SURVEY PLAT ACCEPTED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF LAND MANAGEMENT IN WASHINGTON, D.C., ON JULY 12, 1951.

Subject to:

Valid existing easements and reservations.

An easement dedicated to the State of Alaska for public highways under A.S. 19.10.010, 50 feet each side of the section line.

A right-of-way easement for Alaska Project No. S-0504(4), 110 feet wide, ADL 63698.

Net chargeable acreage under A.S. 29.18.201(c) is 158.1 acres.

Save and Except, those restrictions appearing in the Federal Patent or other conveyance by which the Grantor acquired title;

And Further, the Grantor hereby expressly saves, excepts and reserves out of the grant hereby made, unto itself, its lessees, successors, and assigns forever, all oils, gases, coal, ores, minerals, fissionable

BK01842PG454

89-001091

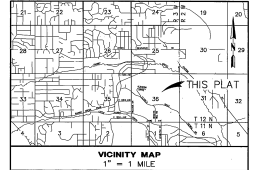
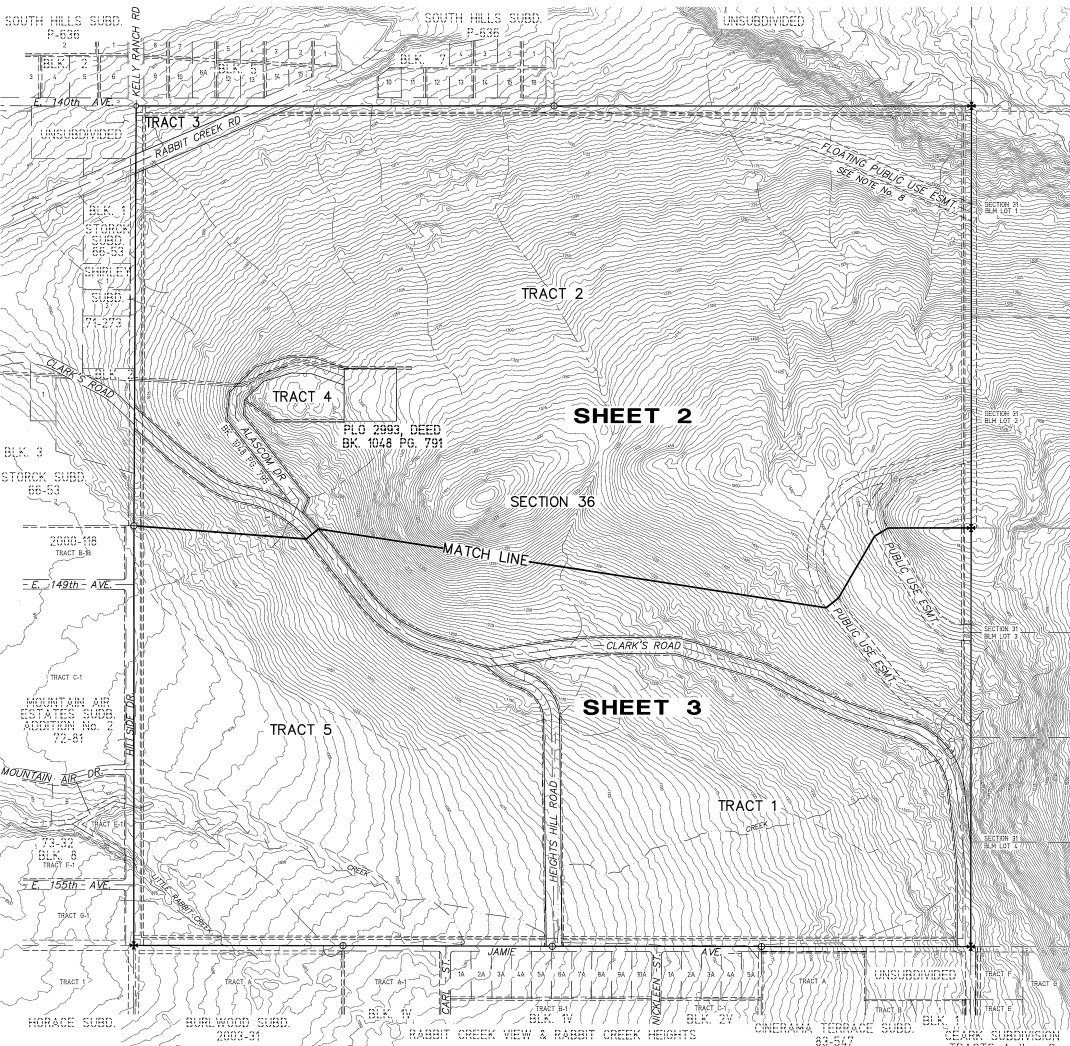
16-

RECORDED-FILED
ANCHORAGE REC
DISTRICT

JAN 6 1 42 PM '89

REQUESTED BY (AM)

ADDRESS



CERTIFICATE OF OWNERSHIP AND DEDICATION

I (We), hereby certify that I (We) hold the herein specified property interest in the property described hereon. I (We) hereby dedicate to the Municipality of Anchorage all areas depicted for use as public utility easements, streets, alleys, thoroughfares, parks, and other public areas shown hereon. There shall be reserved adjacent to the dedicated streets shown hereon a slope reservation easement sufficient to contain cut and fill slopes of 1.5 feet horizontal for each foot vertical (1.5 to 1) of cut or fill for the purpose of grading and maintaining the lateral support of the constructed streets. There is reserved to the grantor, their heirs, successors and assigns, the right to use such areas of any time upon providing and maintaining other adequate lateral support, as approved by the Municipality.

I (We) hereby agree to this plat, and to any restriction or covenant appearing hereon and any such restriction or covenant shall be binding and enforceable against present and successive owners of this subdivided property.

Michael K. Adams
 Municipality of Anchorage, Heritage Land
 632 W. 6th Avenue, Suite 600
 Anchorage, AK 99501-8650

NOTARY ACKNOWLEDGMENT
 Personally appeared Michael K. Adams
 Subscribed and sworn to before me this
 Day of SEPTEMBER, 2008
John Reed 5/16/2008
 Notary for Alaska My Commission Expires

By: **BENEFICIARY**

NOTARY'S ACKNOWLEDGMENT
 Personally appeared
 Subscribed and sworn to before me this
 Day of _____, 20____
 Notary for Alaska My Commission Expires

ACCEPTANCE OF DEDICATION BY THE MUNICIPALITY OF ANCHORAGE

The Municipality of Anchorage hereby accepts for public use and for public purposes the real property dedicated on this plat including, but not limited to, the easements, rights-of-way, alleys, roadways, thoroughfares, and parks shown hereon. Dated at Anchorage, Alaska this
20th Day of August, 2008
 Attest:
Robert S. Merrill *John Adams*
 Clerk Mayor

TAX CERTIFICATION

All real property taxes levied by the Municipality of Anchorage on the area shown on this plat have been paid in full, and if approval is sought between January 1st and the tax due date, there is an deposit with the Chief Fiscal Officer an amount sufficient to pay estimated real property tax for the current year.

8-28-08 *Janet Haynes*
 Date Authorized Official
 Approvals *John R* 9-22-08
 Flotting officer
 Municipal surveyor *Thomas J. Gray* 08/28/08
 On Site Water and Waste Water

- NOTES**
- The bearings shown hereon are lead plane bearings as oriented to the Basis of Bearing and distances are reduced to horizontal ground distances.
 - Distance discrepancies, due to rounding, of 0.01' may be noted hereon.
 - Right of Way widths are to the exact foot shown (50' = 50.00').
 - There shall be a stream protection setback conforming to AMC 21.45.210 along all streams and their tributaries.
 - Future development may require drainage easements for the Drainage Ways shown on this plat.
 - This plat contains Class "A" wetlands. Any proposed activity within wetlands must be authorized by the U.S. Army Corps of Engineers, Regulatory Branch.
 - Public Use Easements are being provided for the benefit of the undeveloped properties to the east. Road improvements will be determined by Project Management & Engineering when development is requested.
 - This is a Floating Public Use Easement. The Easement will be permanently located when a road to access undeveloped property to the east is constructed.
 - The pioneer jeep trail is a private access for the following properties: Lot 2 and the SE 1/4 NW 1/4 Section 31, T12N, R22W, S34, and the N 1/2 Lot 3, Section 31, T12N, R22W, S34, and the SE 1/2 Lot 3, Section 31, T12N, R22W, S34. This access will be allowed to continue to be utilized by the said properties for as long as the properties remain unsubdivided and alternate physical and legal access to the properties does not exist. Upon subdivision of any one of the properties, a new road to the subdivided property must be built to Municipal standards utilizing the public use easement(s) dedicated by the plat for this purpose. Use of the pioneer jeep trail will automatically terminate on those portions of the trail where access is now being provided by the newly constructed road(s).
 - There are existing electric facilities installed under an Easement recorded in Book 1836, Page 594, not being dedicated by this plat. There are existing electric facilities installed under a General Easement recorded at Volume 97, Page 203, not being dedicated by this plat.
 - CEA has existing electric facilities located within the road right-of-way area being dedicated by this plat. The use of this portion of the right-of-way is subject to the prior rights of CEA. If the use of this portion of the dedicated right-of-way interferes with or requires these facilities to be relocated, the cost of the relocation will be the responsibility of the party or parties causing the relocation.
 - Fifteen feet (15') wide natural gas easements centered on the existing Entar Natural Gas Company gas mainlines shown as 91-1742 and 82-2144 and shown on Entar drawings A3040Q, A3140Q and A3141Q are being dedicated by this plat.
 - Clarks Road Right of Way, State of Alaska Route No. 133715 per State of Alaska patent No. 5207. ~~NOT DEDICATING THIS PLAT~~
 - Alscorn Drive and Heights Hill Road are being dedicated by this plat.

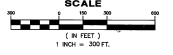
LEGEND

✱	Found BLM/GLD Aluminum or Brass Cap Monument
⊕	Found Aluminum or Brass Cap Monument
⊙	Found Rebar with Aluminum or Plastic Cap
⊖	Found 1/2" or 5/8" Rebar
○	Found Iron Pipe
⊙	Set 5/8"x30" Rebar with 2" Aluminum Cap
2833.637	Measured
(2640.00' BLM)	Bureau of Land Management Record
(13224.00' RCV/RCH)	Record Per Plat No. 2004-91
(2640.70' SHS)	Record Per Plat No. 78-203
(2638.08' SS)	Record Per Plat No. 69-53
(2841.36' M&E)	Record Per Plat No. 73-89
—	Stream, See Note No. 4
—	Drainage Way, See Note No. 5
—	Class A Wetlands, See Note No. 6
T & E Esmt.	Telecommunications & Electric Easement

PLAT APPROVAL
 Plat approved by the Municipal Planning Authority this
28th Day of August, 2008
Michael C. Kopy
 Authorized Official

SURVEYOR'S CERTIFICATE
 I, William D. Cohen, professional land surveyor, do hereby certify that the plat of Section 36 Subdivision, Tracts 1, 2, 3, 4, & 5 is a true and correct representation of lands actually surveyed and that all distances and bearings are shown correctly and that all permanent exterior control monuments, all other monuments, and lot corners have been set and staked as shown, in accordance with municipal standards.
 July 28, 2008 *William D. Cohen*
 Date William D. Cohen, PLS No. LS-7537

RECORDED - FILED
 ANCHORAGE REC. DIST.
 DATE _____ M.
 TIME _____
 DRAWN BY _____
 APPROVED BY _____



PLAT OF
SECTION 36 SUBDIVISION
TRACTS 1, 2, 3, 4 & 5
 A SUBDIVISION OF SECTION 36, T12N, R22W, S34, EXCEPTING
 PLO 2993 AND CLARK'S ROAD RIGHT OF WAY PER STATE OF
 ALASKA PATENTS 5207 AND 10136
 LOCATED WITHIN
 SEWARD MEMORIAL WARDENAGE RECORDS DISTRICT, ALASKA
 CONTAINING 641.084 ACRES

300 W. 2nd AVENUE
 ANCHORAGE, ALASKA 99503
 PHONE (907) 339-4500
 FAX (907) 338-8287

ASTS LLC
 SURVEYING & MAPPING

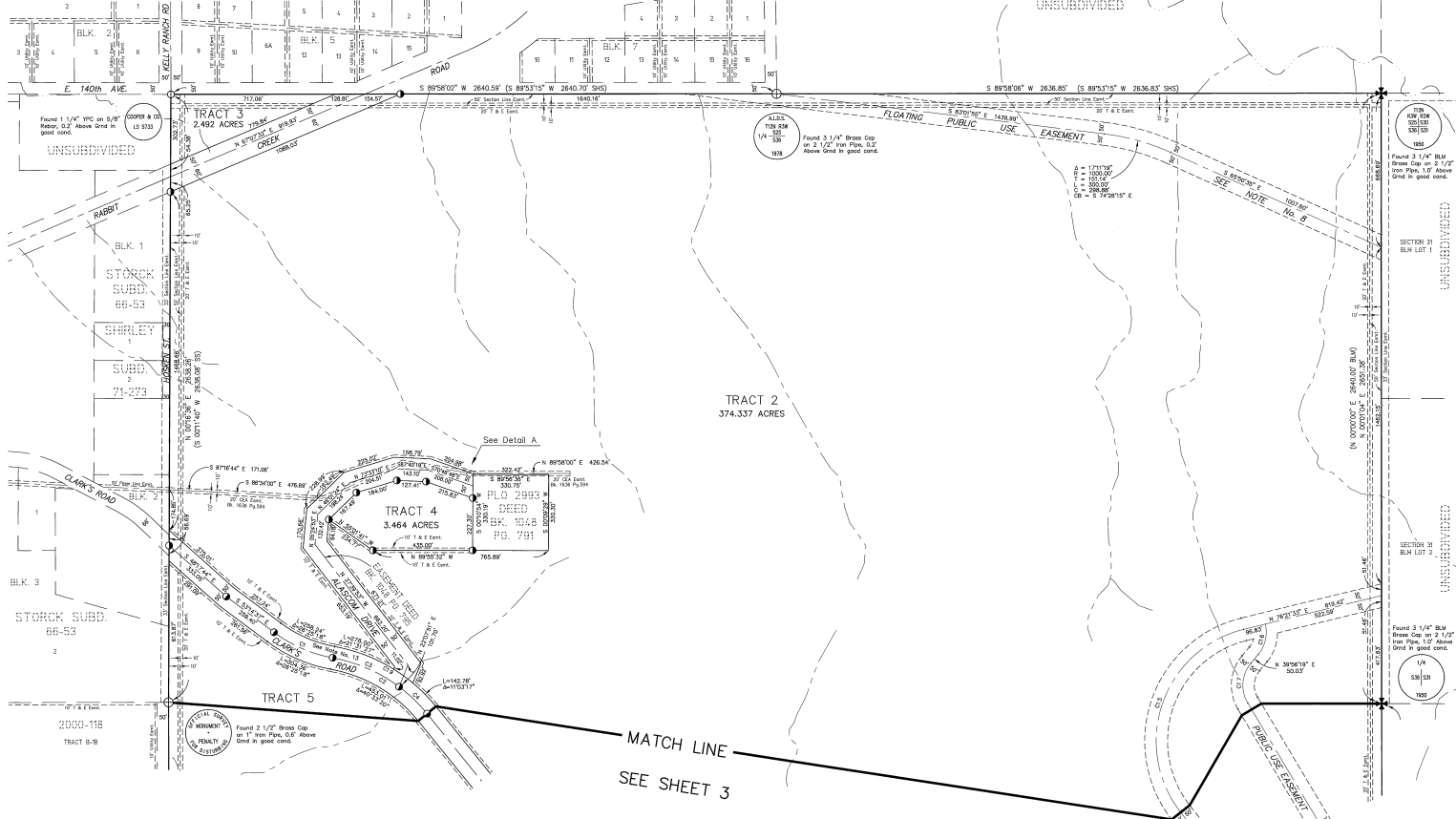
DATE: 7/28/08
 DRAWN: BR/CH/NC
 CHECKED: WDC PLO BK: 3384 ORD: 3028 3095 3-11622-1

SCALE: 1" = 300'
 SHEET 1 of 3

Anchorage Recording District Plat No. 2008-100

SOUTH HILLS SUBD.
P-636

SOUTH HILLS SUBD.
P-636 78-203



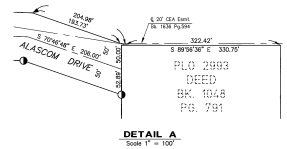
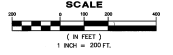
NOTES

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- Public Use Easements are being provided for the benefit of the undeveloped properties to the east. Road improvements will be determined by Project Management & Engineering when development is requested.
- This is a Floating Public Use Easement. The Easement will be permanently located when a road to access undeveloped property to the east is constructed.
- The pioneer jeep trail is a private access for the following properties: Lot 2 and the SE 1/4 NW 1/4 Section 31, T12N, R2W, S4E; and the NW 1/2 Lot 3, Section 31, T12N, R2W, S4E; and the S 1/2 Lot 3, Section 31, T12N, R2W, S4E. This access will be allowed to continue to be utilized by the said properties for as long as the properties remain unadvised and otherwise physical and legal access to the properties does not exist. Upon subdivision of any one of the properties, a new road to the subdivided property must be built to Municipal standards utilizing the public use easement(s) dedicated by the plat for this purpose. Use of the pioneer jeep trail will automatically terminate on those portions of the trail where access is now being provided by the newly constructed road(s).
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- Fifteen feet (15') wide natural gas easements centered on the existing Drator Natural Gas Company gas mainlines known as 31-1742 and 82-2144 and shown on Estor drawings A30400, A31400 and A31410 are being dedicated by this plat.
- Clark's Road Right of Way, State of Alaska Route No. 133715 per State of Alaska patent No. 5207. *NOT DEDICATED TO THIS PLAT.*
- Alascom Drive and Heights Hill Road are being dedicated by this plat.

LEGEND

- ✦ Found BM/GLO Aluminum or Brass Cap Monument
- ⊕ Found Aluminum or Brass Cap Monument
- ⊙ Found Rebar with Aluminum or Plastic Cap
- Found 1/2" or 5/8" Rebar
- ⊙ Found Iron Pipe
- ⊙ Set 5/8"x30" Rebar with 2" Aluminum Cap
- 2633.63' Measured
- (2645.00' BLM) Bureau of Land Management Record
- (1322.00' RDV/RCH) Record Per Plat No. 2004-91
- (2640.70' SHS) Record Per Plat No. 78-203
- (2638.08' SS) Record Per Plat No. 66-53
- (2641.38' WAE) Record Per Plat No. 72-81
- Stream, See Note No. 4
- Drainage Way, See Note No. 5
- Class A Wetlands, See Note No. 6
- T & E Easmt. Telecommunications & Electric Easement

CURVE	DELTA	RADIUS	TANGENT	LENGTH	CHORD	CHORD BEARING
C1	26°25'18"	610.00	143.20	281.30	278.81	S 66°27'16" E
C2	40°33'20"	690.00	284.93	488.40	478.27	S 30°23'15" E
C3	26°29'30"	690.00	162.42	316.20	316.20	S 66°25'09" E
C4	14°03'50"	690.00	35.11	169.37	168.84	S 46°08'30" E
C19	11°45'30.37"	500.00	77.49	399.29	391.09	N 19°08'14" E
C16	53°34'46"	180.00	75.74	140.27	135.22	N 13°08'56" E
C17	70°48'20"	150.00	106.51	183.37	173.80	N 04°33'09" E
C19	40°33'20"	740.00	273.41	523.79	512.93	S 59°23'15" E



PLAT OF
SECTION 36 SUBDIVISION
TRACTS 1, 2, 3, 4 & 5
A SUBDIVISION OF SECTION 36, T12N, R2W, S4E EXCEPTING PLO 2993 AND CLARK'S ROAD RIGHT OF WAY PER STATE OF ALASKA PATENTS 5207 AND 10136
LOCATED WITHIN SECTION 36, TOWNSHIP 12 NORTH, RANGE 2 WEST, SEWARD MERIDIAN, ANCHORAGE RECORDING DISTRICT, ALASKA
CONTAINING 641.064 ACRES

ASTS LLC
SURVEY & MAPPING
300 W. 3RD AVENUE
ANCHORAGE, ALASKA 99503
PHONE (907) 339-6900
FAX (907) 339-9507

DATE: 7/2008 SCALE: 1" = 200'
DRAWN: JBR/AVC SHEET 2 of 3
CHECKED: WDC (P.D. BK. 3384) DRG. 3042 3041 11822-1

Anchorage Recording District Plat No. 2008-100

Exhibit C

Sample Conservation Easement for the Section 36 Mitigation Site

Exhibit D

Sample Credit Receipt & Ledger for the Section 36 Mitigation Site

Example Credit Receipt

Mitigation Bank Credit Receipt HLB Mitigation Bank Section 36 Mitigation Site								
Transaction Date	Permittee Name/Address/Phone	Agency/ Office/Contact	Permit Number	Project Location	Description	Permitted Acreage	Debits	Bank Credits Issued
YYYYMMDD	Example Permittee Address Phone	Corps/POA/Name	POA-xx-xxxx	Physical Location	"Subdivision, roads, pads, utilities in AWMP Class A wetlands."	2.53	1.85	1.85
						Total Bank Credits Issued this Transaction		1.85
Bank Sponsor Signature			Date		Permittee Signature			Date

Example Credit Ledger

Mitigation Bank Credit Ledger HLB Mitigation Bank Section 36 Mitigation Site											
Type	Jurisdiction	Date	Permittee	Credits	Permit	Credit Classification	Impact HUC	Impact Quantity	Available Credits	TW	Comment
Init	Federal	3/15/2020		20		Palustrine Forested					
Rel	Federal	3/15/2020		10		Palustrine Forested			10		
Wdr	Federal	1/12/2022	XYZ Corp.	10	POA-xxxx-xxx	Palustrine Forested	1902030206	20	0.00	10	
Rel	Federal	3/27/2025		10		Palustrine Forested			10		

Credit Ledger Key:

Type - There are three transaction types: Initiation (Init), Credit Release (Rel), and Credit Withdrawal (Wdr).
 Initiation (Init) transactions describe the potential credits a bank may have once it meets all of its success criteria.
 Release (Rel) transactions describe credits which have been released for sale or debit, typically by meeting a performance milestone.
 Withdrawal (Wdr) transactions describe credit sales or debits.

Jurisdiction – Federal indicates the credits could be used to offset federal impacts. Non-federal indicates credits that may not be used to offset federal impacts. Federal credits may be sold to offset non-federal impacts.

Date – The date the credits were sold or debited (withdrawn).

Permittee – This column is only populated on credit sale (Wdr) transactions and contains the name of the entity purchasing or otherwise securing the credits.

Credits – This column contains the number of credits involved in this transaction.

Permits – The Permits column contains all permit numbers associated with any withdrawal transactions –from the USACE, USFWS, and from other federal, state, and local agencies.

Credit Classification – This column contains the credit classification used for the transaction’s credits. Included are hydrogeomorphic (HGM) class, Cowardin class, ADCM REV category, or other classification.

Impact HUC – Impact HUC contains the 8-digit hydrologic unit code of the impact site if entered on withdrawal transactions.

Impact Quantity – Impact Quantity contains the acres or linear feet of impact if entered on withdrawal transactions.

Available Credits – Contains a running total of available credits. Available credits = Total Released Credits – Total Withdrawn Credits

TW – The Total Withdrawal Credits (TW) contains a running total of all credits sold or debited.

For Recording in Anchorage Recording District
AFTER RECORDING, RETURN TO:
Municipality of Anchorage
Heritage Land Bank
P.O. Box 196650
Anchorage, AK 99519-6650

CONSERVATION EASEMENT

THIS CONSERVATION EASEMENT is made this _____ day of August, 2015, by the **Municipality of Anchorage**, an Alaska municipal corporation, whose address is P.O. Box 19660, Anchorage, AK 99519-6650, (hereinafter "Grantor"), and the **Heritage Land Bank, Municipality of Anchorage** (hereinafter "HLB/MOA") whose address is P.O. Box 196650, Anchorage, AK 99519-6650, as Grantee, for good and valuable consideration, in hand received, the receipt of which is hereby acknowledged.

WHEREAS, the real property subject to this conservation easement (the "Protected Property") is an undeveloped natural area within the Municipality of Anchorage that contains valuable wetlands and possesses natural, ecological, habitat and open space values (together the aforesaid wetlands and values are hereinafter referred to as the "Conservation Values"); and

WHEREAS, Grantor is the owner in fee simple of the Protected Property, which is described below; and

WHEREAS, on August 25, 2015, the Anchorage Assembly approved AO 2015-92 authorizing the issuance of this Conservation Easement;

NOW THEREFORE, pursuant to the laws of Alaska and in particular Alaska Statutes §§ 34.17.010 - .060 (the Uniform Conservation Easement Act, as such law exists or may hereafter be amended), Grantor does hereby grant and convey to the HLB/MOA, its successors and assigns, forever, with warranties of title, subject to easements, covenants, conditions, restrictions and limitations of record, this Conservation Easement in perpetuity over the Protected Property of the nature and character and to the extent hereinafter set forth, as to the Protected Property described as follows:

SEE ATTACHED LEGAL DESCRIPTION AND EXHIBITS

SUBJECT, however, to any easements, rights, and reservations, covenants, plat notations, patent reservations and rights-of-way, conditions, restrictions and limitations of record.

Grantor and its successors in interest shall be entitled to enforce, on a nonexclusive basis, the terms of the following restrictive covenants as the fee simple owner of the Protected Property:

1. PURPOSE.

The purpose of the Conservation Easement is to preserve and protect the Conservation Values of the Protected Property in perpetuity, and in the event of the degradation or destruction of the Conservation Values, to provide for the enhancement and restoration of such Conservation Values. It is further the specific purpose of this Conservation Easement to prevent any use of the Protected Property that would significantly impair or interfere with its wetland functions and values, open space and significant natural habitat values, character, use or utility. In achieving these purposes, it is the intent of this Conservation Easement to permit the continuation by the HLB/MOA of such uses of the Protected Property as may be conducted consistent with the Conservation Values protected herein.

2. GRANT OF CONSERVATION EASEMENT.

Grantor hereby unconditionally and absolutely grants and conveys to the HLB/MOA, its successors and assigns, in perpetuity, a Conservation Easement in gross with respect to the Protected Property, as more particularly set forth herein for the purposes of preserving and protecting the Conservation Values of the Protected Property. The HLB/MOA hereby accepts the Conservation Easement and agrees to hold it for the purposes set forth in paragraph 1.

3. RESTRICTED ACTIVITIES.

The activities listed below are prohibited to be carried on by any person or entity on the Protected Property, except as reasonably determined by HLB/MOA or its successor in administrative function to be necessary to protect natural resources or public safety, or to manage and maintain the Protected Property in perpetuity in its natural and undeveloped state for conservation purposes:

- a. constructing or placing improvements including, but not limited to, buildings, fixed or improved camping accommodations, mobile homes, roads, hard trails, playgrounds, fences, billboards, or signs other than those signs necessary for boundary, trespass, direction, educational or general information concerning the Protected Property;

- b. changing the topography of the Protected Property in any manner;
- c. removing or destroying plants including, but not limited to, all standing and downed timber;
- d. using biocides, pesticides and/or herbicides;
- e. manipulating or altering natural water courses, shores, marshes or other water bodies or activities or uses detrimental to water purity on the Protected Property; and
- f. operating motorized vehicles.

4. PROHIBITED ACTIVITIES.

The following listed activities on the Protected Property by any person or entity are prohibited:

- a. introducing fish, wildlife, or plants not indigenous to the Municipality, including, but not limited to, the grazing of domestic animals; and
- b. dumping, releasing, storing, or placing trash, garbage, Hazardous Substances or other unsightly or offensive material. Hazardous Substances as used herein means any chemical, substance, material, or waste which is defined, classified, listed or designated as hazardous, toxic or radioactive, or any other similar term, by any applicable federal, state or local environmental statute, regulation, or ordinance, including, but not limited to, all those substances identified in Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 94 Stat. 2767, as such may be amended and supplemented (“CERCLA”), Section 311 of the Federal Water Pollution Control Act, 33 U.S.C. § 1251, *et seq.*, or AS 46.03.826(5).

5. AUTHORIZED ACTIVITIES.

Notwithstanding the restrictions set forth in Section 4 (Restricted Activities) of this Conservation Easement, HLB/MOA may:

- a. construct and maintain trails for nonmotorized use so long as (i) the trails, except for purposes of ingress to and egress from the Protected Property, are located more than twenty feet from the Protected Property lines which are in common with the property lines of the parcels adjacent to the Protected Property, and (ii) the trails are designed and constructed so as to reasonably limit the impact on the Conservation Values of the Protected Property;

- b. undertake measures to protect, restore, or enhance the wetlands on the Protected Property;
- c. maintain existing utilities, if any, crossing the Protected Property;
- d. allow recreational, educational, and scientific uses of the Protected Property, limited to low-intensity, non-motorized forms of recreations, such as hiking, bird-watching and photography; and
- e. other uses not inconsistent with this Conservation Easement.

6. RIGHT CONVEYED TO THE HLB/MOA.

HLB/MOA is hereby authorized to place a sign of not more than three square feet on the Protected Property indicating the name of the Protected Property and that the Protected Property has been preserved and protected by HLB/MOA. If HLB/MOA places such sign on the Protected Property, it shall reasonably maintain the sign and shall be responsible for those maintenance costs.

7. GENERAL PROVISIONS.

- a. Nothing herein is intended nor shall it be deemed to create in any third party the right to enforce these covenants.
- b. The Conservation Easement and restrictive covenants herein shall run with, are appurtenant to, and benefit and burden the Protected Property and the respective parties in interest, subsequent successor parties in interest, and transferees of the Protected Property.
- c. Nothing in this Conservation Easement is intended to relieve the fee simple owner of the Protected Property from liability for injuries occurring on, and resulting from their activities on the Protected Property, if any, for which it would otherwise ordinarily be liable, subject, however, to provisions of AS 09.65.200 and AS 34.17.055, as such may be amended from time to time, or other applicable law.
- d. To the best of Grantor's knowledge, Grantor represents and warrants to that the Protected Property has not been wasted, nor the topography or waterways on the Protected Property been altered, nor have other actions or activities been conducted on the Protected Property which have had a negative impact on the natural resources on the Protected Property and the Protected Property is in full compliance with all federal, state, and local laws, regulations, and requirements applicable to the Protected Property and its use.

