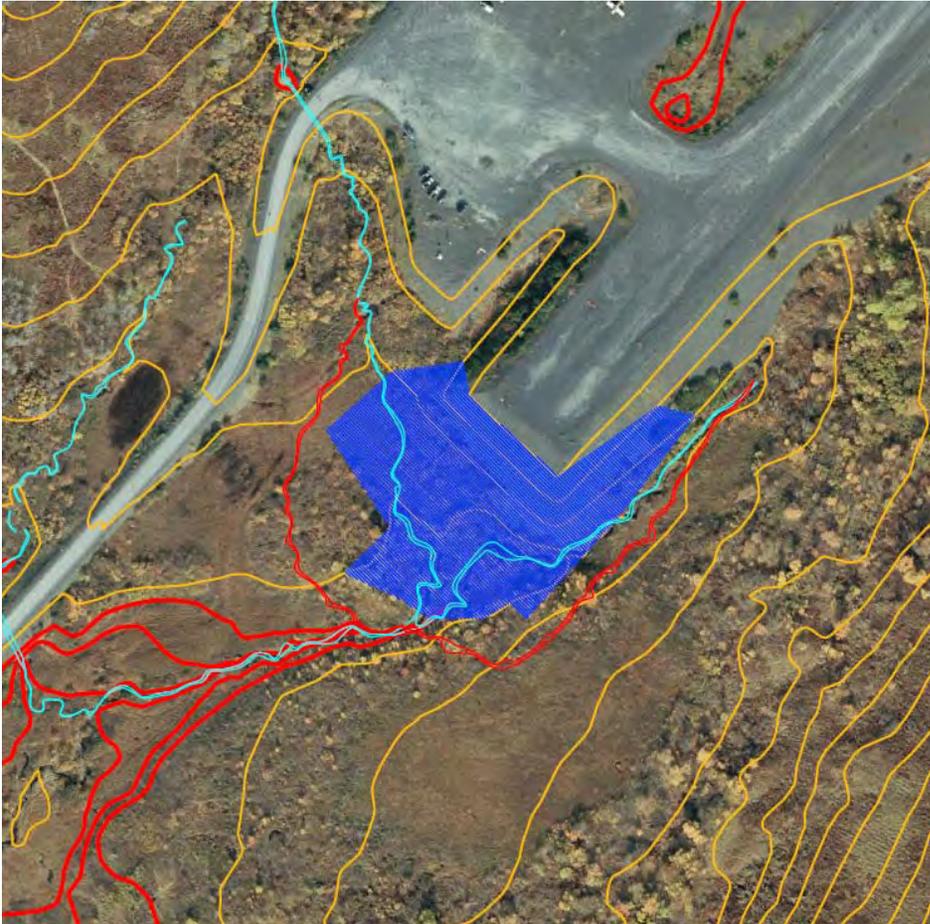


Figure 8. Proposed Re-Alignment of Stream 3 & 4 (in red) with Impacted Areas (shaded blue) Connecting in Low Area (also in red)



Summary

Old Harbor Native Corporation and Shearwater Systems has taken every precaution to consult with all necessary agencies involved with stream and marine mitigation since the onset of the Old Harbor Airport Safety Enhancement and proposed Runway Extension projects. The Alaska Department of Fish and Game have been consulted with on a regular basis and have made several trips to the job site to assist in developing the best alternatives for stream re-alignment. All necessary staff from ADF&G will continue to be consulted as the stream design details are refined. Shearwater has been diligent in following ADF&G's recommendations to sample fish in designated streams looking for species diversity and abundance. Due to these sampling efforts, the Old Harbor Airport Project Team will be in a better position to measure success after the re-alignment of streams is complete and the juvenile fish return to forage and find shelter.

Appendix 1. Trip Reports and Permits

STATE OF ALASKA

SEAN PARNELL, Governor

DEPARTMENT OF FISH AND GAME

DIVISION OF HABITAT

333 RASPBERRY RD.
ANCHORAGE, ALASKA 99518
PHONE: (907) 267-2342
FAX: (907) 267-2499

MEMORANDUM

TO: Michael Daigneault
Anchorage Area
Regional Supervisor

FROM: Will Frost *WF*
Habitat Biologist

DATE: May 16, 2012

SUBJECT: Trip Report, May 2012 Old Harbor Airport Project

On May 5-7, 2012, I joined Brian Lance, National Marine Fisheries Service, and Richard Wiebe and Andy Dickerson, Shearwater Systems (Shearwater) in Old Harbor to sample for the presence of fish in streams which may be impacted by the proposed Old Harbor Airport runway extension project.

The city of Old Harbor is proposing to extend the single north/south runway about 2,000 linear feet. The purpose of the extension is to allow a DC-6 aircraft to transport fish out of Old Harbor from a proposed fish processing plant. An Environmental Assessment is being written by the U.S. Army Corps of Engineers. The stream channel geomorphology was visually estimated based on the Dave Rosgen stream classification system.

We began sampling with a backpack electrofisher in an unnamed stream ("Sculpin Creek") located on the north side of the runway (Figure 1). Sculpin Creek flows into Midway Bay. We started at tidewater and worked upstream about 840 linear feet. We captured and released 5 juvenile coho salmon, 1 Dolly Varden, and over 50 sculpin. Sculpin Creek will be nominated to the Anadromous Waters Catalog. The stream's water temperature was 5 ° C.

The proposed north runway extension will fill about 400 linear feet of Sculpin Creek and a portion of the marine habitat at the channel outlet. Shearwater is proposing to relocate the lower end of Sculpin Creek by constructing a new channel through a low hill that will divert the stream into the Big Creek estuary (Stream No. 258-52-10010). The diversion will require blasting to create the new channel and closely replicate the existing channel features. The existing channel is about 3-feet wide and was estimated to be Rosgen type E3 (Figure 2).

We sampled an unnamed stream on the southeast edge of the runway (Stream No. 258-52-10012-2008) (Figure 1). We began by sampling above the upper extent of the specified waterbody and worked upstream. We sampled 330 linear feet of the stream. No fish were captured or observed. The stream flow in this location is intermittent. The stream's water temperature was 6 ° C.

Stream No. 258-52-10012-2008 will also be directly impacted by the south end runway extension. Shearwater is proposing to construct a new channel through a low hill southeast of the runway that will divert the new channel back into the existing channel south of the new runway extension. The stream will have to be relocated to the southeast of the new runway embankment. The diversion will require blasting

to create the new channel and closely replicate the existing channel features. The existing channel is about 5-feet wide and was estimated to be Rosgen type E2 (Figure 3).

We sampled an unnamed tributary to Stream No. 258-52-10012-2008 (Figure 1). We began where the stream flows into the specified waterbody and worked upstream about 1,700 linear feet. We captured 2 juvenile coho salmon and 11 juvenile Dolly Varden. The unnamed stream will be nominated to the Anadromous Waters Catalog. The stream's water temperature was 6 ° C.

The proposed runway extension will fill about 350 linear feet of the unnamed tributary to Stream No. 258-52-10012-2008 below the airport access road. Shearwater is proposing to relocate the lower end of the creek by constructing a new channel on the west side of the airport access road and divert the stream into "Stream #2" (Stream No. 258-52-10012). A survey will be conducted in 2012 to determine the feasibility of relocating the stream. The existing channel is about 4-feet wide and was estimated to be Rosgen type E3 (Figure 4).

At about 5:00 p.m., we set four baited minnow traps in an unnamed stream that flows into the Old Harbor Lagoon. We set two traps above an access road to the village water treatment facility and two traps below the road. Twin elliptical culverts set on the streambed convey the stream under the road (Figure 5). The stream flows through a series of beaver ponds above the road. We left the traps to soak overnight. The stream is not located in the airport project area.

On May 6, 2012, at about 9:30 a.m., we removed the minnow traps. The first trap located below a beaver dam captured 8 young-of-year coho salmon, trap two located above the culvert inlet captured no fish, trap three located below the culvert outlet captured 1 young-of-year coho salmon, and trap four located above the lagoon, captured 8 juvenile coho salmon. The unnamed stream will be nominated to the Anadromous Waters Catalog.

We returned to the airport project area and used the electroshocker to sample an unnamed stream ("Stream #1") that flows into Stream No. 258-52-10012-2008 (Figure 1). We began where the stream flows into the specified waterbody and worked upstream about 600 linear feet. We captured 2 juvenile coho salmon and 4 juvenile Dolly Varden. The unnamed stream will be nominated to the Anadromous Waters Catalog. The stream's water temperature was 8 ° C. The proposed runway project will not impact this stream. The existing channel is about 2-feet wide and was estimated to be Rosgen type E4.

At about 3:00 p.m., we set four baited minnow traps in Stream #2. We set two traps below the airport access road and two traps above the road. We left the traps to soak overnight.

We used the electrofisher to sample an unnamed stream that flows under the north end of the runway through a perched culvert (Figure 1). The culvert is perched about 6-inches. The stream flows east into Midway Bay. We began sampling about 1,000 feet east of the runway and worked downstream about 650 linear feet to the bay. We captured 7 juvenile coho salmon. The unnamed stream will be nominated to the Anadromous Waters Catalog. No water temperature was taken. The proposed runway project will not impact this stream. The existing channel is about 4-feet wide and was estimated to be Rosgen type E3.

On May 7, 2012, at about 9:00 a.m., we removed the minnow traps from Stream #2. The two traps below the road captured 1 juvenile coho salmon and 11 juvenile Dolly Varden. The traps above the road captured 4 young-of-year coho salmon. The existing channel is about 2-feet wide and was estimated to be Rosgen type E3.

The ADF&G is currently planning on returning to Old Harbor to assist in a fish sampling effort in June 2012.

cc: S. Schrof, ADF&G
L. Van Daele, ADF&G
D. Tracy, ADF&G
A. Ott, ADF&G
B. Lance, NOAA
M. Salyer, COE
A. Dickerson, Shearwater Systems
C. Berns-Lopez, Old Harbor Native Corp.



Figure 1.

0 410 820 1,640 2,460 3,280
Feet

ADF&G



Figure 2. Sculpin Creek, View to west.



Figure 3. Stream No. 258-52-10012-2008 on left side of photograph, view to south.



Figure 4. Unnamed tributary stream to Stream No. 258-52-10012-2008. View to west.



Figure 5. Twin culverts in unnamed stream that flows into the village lagoon.

MEMORANDUM

State of Alaska

Department of Fish and Game
Division of Habitat

TO: Michael Daigneault
Central Region
Regional Supervisor

DATE: July 5, 2012

PHONE NO: 267-2813

FROM: Will Frost
Habitat Biologist

SUBJECT: Old Harbor Airport Project

On June 16 to 17, 2012, I joined Andy Dickerson and Brian Wiebe, Shearwater Systems (Shearwater) in Old Harbor to conduct a second sampling effort for the presence of fish in streams which may be impacted by the proposed Old Harbor Airport runway extension project. A previous joint sampling effort was conducted in May 2012.

The city of Old Harbor is proposing to extend the single north/south runway about 2,000 linear feet (Figure 1). The purpose of the extension is to allow a DC-6 aircraft to transport fish out of Old Harbor from a proposed fish processing plant. An Environmental Assessment is being written by the U.S. Army Corps of Engineers. Shearwater will be conducting monthly sampling efforts this summer using an electrofisher in streams and a beach seine in marine waters that may be impacted by the project. The sampling is to gather baseline information of fish presence in streams that may be impacted by the project. I was present to assist and train Shearwater in the use of the electrofisher. The stream channel geomorphology was visually estimated based on the Rosgen stream classification system.

Mr. Dickerson and I used a 17-foot skiff to travel to the north side of the proposed runway extension at the outlet of "Sculpin Creek". The outlet is located in a marine estuary that may be filled for the north runway extension. At high tide, we used a gill net with a 3-inch mesh to sample for the presence of fish that are present in the estuary. We made two sets by placing one end of the gill net on the beach and deploying the net from the skiff, making an arc back to the beach (Figure 2). We captured one starry flounder. We believe the mesh size was too large to capture small fish and Mr. Dickerson will acquire a beach seine to conduct future sampling efforts.

We used the electrofisher to sample an unnamed stream ("Stream #1") that flows into Stream No. 258-52-10012 (Figure 1). This stream was sampled during the May 2012 effort. We began where the stream flows into the specified waterbody and worked upstream about 600 linear feet (Figure 3). We captured 4 juvenile Dolly Varden and 10 sculpin. Juvenile coho salmon were captured during the May sampling effort. Based on the May effort, the unnamed stream will be nominated to the Anadromous Waters Catalog. The proposed runway project will not impact this stream. The existing channel is about 2-feet wide and was estimated to be Rosgen type E4.

We sampled an unnamed stream ("Stream #2") that flows into Stream No. 258-52-10012 (Figure 1). This stream was sampled during the May 2012 effort. We began where the stream flows into the specified waterbody and worked upstream about 600 linear feet. We captured 1 juvenile Dolly Varden. Juvenile coho salmon were captured during the May sampling effort. Based on the May effort, the unnamed stream will be nominated to the Anadromous Waters Catalog. The existing channel is about 2-feet wide and was estimated to be Rosgen type E4. We walked to the headwater of the stream to determine the stream location in relation to Stream No. 258-52-10012 (Figure 1). The lower reach of Stream No. 258-52-10012, in the project area, may be diverted into Stream #2.

On the morning of June 17, 2012, we set 5 baited minnow traps in Kuingcuk Creek that flows into the Old Harbor Lagoon (Figure 4). The stream is located in an area of recent beaver activity. We set two traps in an unnamed tributary stream, two traps below a beaver dam and one trap above the beaver dam. The traps soaked about seven hours. The stream reach below this sampling effort was sampled with minnow traps during the May sampling effort. Juvenile coho salmon were located during the May sampling effort. The stream is not located in the airport project area. The two traps in the unnamed tributary captured 15 juvenile coho salmon and 2 Dolly Varden. The traps below the beaver dam captured 6 juvenile coho salmon and 4 Dolly Varden. The trap above the beaver dam captured no fish and no fish were observed. The beaver dam may be a barrier to juvenile fish passage (Figure 5).

The location of Stream No. 258-52-10012 is incorrectly located in the Anadromous Waters Catalog. I used a hand held Garmin Global Positioning System unit to correct the stream location by walking the stream channel from tidewater to its headwater. The corrected stream location will be nominated to the Anadromous Waters Catalog (Figure 1).

We sampled Stream No. 258-52-10012. We began above the airport access road and worked upstream about 1,700 linear feet (Figure 6). We captured 10 juvenile coho salmon and 45 Dolly Varden. The presence of coho rearing will be nominated to the Anadromous Waters Catalog.

The proposed runway extension will fill about 350 linear feet of Stream No. 258-52-10012 below the airport access road (Figure 7). Shearwater is proposing to relocate the lower end of the creek by constructing a new channel on the west side of the airport access road and divert the stream into "Stream #2". A survey will be conducted in 2012 to determine the feasibility of relocating the stream. The existing channel is about 4-feet wide and was estimated to be Rosgen type E3.

We sampled Sculpin Creek located on the north side of the runway (Figure 1). Sculpin Creek flows into Midway Bay. We started at tidewater and worked upstream about 840 linear feet. We captured and released 20 juvenile coho salmon, 36 Dolly Varden, and over 35 sculpin. The stream was sampled during the May sampling effort. Based on the May and June sampling efforts, Sculpin Creek will be nominated to the Anadromous Waters Catalog.

The proposed north runway extension will fill about 400 linear feet of Sculpin Creek and a portion of the marine habitat at the channel outlet. Shearwater is proposing to relocate the lower end of Sculpin Creek by constructing a new channel through a low hill that will divert the stream into the Big Creek estuary (Stream No. 258-52-10010). The diversion will require blasting to create the new channel and closely replicate the existing channel features. The existing channel is about 3-feet wide and was estimated to be Rosgen type E3.

Stream No. 258-52-10012-2008 will also be directly impacted by the south end runway extension (Figure 1). Shearwater is proposing to construct a new channel through a low hill southeast of the runway that will divert the new channel back into Stream No. 258-52-10012 south of the new runway extension. The stream will have to be relocated to the southeast of the new runway embankment. The diversion will require blasting to create the new channel and closely replicate the existing channel features. The existing channel is about 5-feet wide and was estimated to be Rosgen type E2.

cc: S. Schrof, ADF&G
L. Van Daele, ADF&G
D. Tracy, ADF&G
A. Ott, ADF&G
B. Cassidy, KIB
B. Lance, NOAA
B. Rice, USFWS
M. Salyer, COE
A. Dickerson, Shearwater Systems
C. Berns-Lopez, Old Harbor Native Corp.



Figure 1.

0 0.05 0.1 0.2 0.3 0.4
Miles

ADF&G



Figure 2. Deploying a gill net in the mouth of Sculpin Creek.



Figure 3. Sampling Stream # 1.



Figure 4. Kuingcuk Creek.



Figure 5. Beaver dam in Kuingcuk Creek.



Figure 6. Sampling Stream No. 258-52-10012 above the airport access road.



Figure 7. Reach of Stream No. 258-52-10012 that is proposed to be filled for the south runway extension.



Memorandum

Date: August 1, 2012

**To: Will Frost
Habitat Biologist**

Subject: Old Harbor Airport Project

**From: Andy Dickerson
Environmental Scientist
Shearwater Systems**

On July 15th, 2012, I was assisted by David Burns of Shearwater Systems in Old Harbor to conduct the third sampling effort for the presence of fish in the streams that may be impacted by the proposed Old Harbor Airport runway extension project. Previous efforts were conducted in May and June of 2012.

We utilized the electrofisher to sample an unnamed stream (“Stream #2”) that flows into Stream No. 258-52-10012 (Figure 1). This stream was sampled during the May and June efforts. We began where the stream flows into the the specified water body and worked upstream approximately 600 linear feet. We captured 24 coho ranging in size from 25-30 millimeters. GPS waypoints were collected at where we started, finished and where we captured and released fish (Figure 2).

We continued sampling Stream No 258-52-10012 (“Stream #3”). We began approximately 200 feet downstream of the culvert and worked upstream approximately 1,800 linear feet (Figure 2). We captured and released 40 Dolly Varden ranging in size from 25-150 mm and 11 coho that were approximately 40 mm. All of the coho were at the starting point.

Sculpin Creek (north side of runway) was sampled. We began sampling where Sculpin Creek flows into Midway Bay and worked upstream approximately 850 linear feet (Figure 3). We captured and released 18 juvenile coho ranging in size from 20-90mm, 10 Dolly Varden ranging in size from 25-150 mm and 13 sculpin ranging in size from 35-80mm.

Alternatives are currently being drawn up for relocating portions of Stream #3 and Sculpin Creek. An update will be prepared later in the summer and a meeting proposed with available Alaska Fish and Game Habitat Biologists.

Figure 1. Stream Locations at the Old Harbor Alaska Airport



Figure 1.

0 0.05 0.1 0.2 0.3 0.4
Miles

ADF&G



Figure 2. GPS Points for Stream #2 and #3 at the Old Harbor Airport Project



Figure 3. GPS Points for Sculpin Creek at the Old Harbor Airport Project



200 100 0 200 Feet





Figure 4. Sampling in Stream #3 Showing Dense Vegetation



Figure 5. Sampling in Stream #3 Near a Small Water Fall



Figure 6. Sampling in Sculpin Creek Near a Large Rock



Figure 7. View From Sculpin Creek Looking Towards Potential Diversion





Memorandum

Date: August 29, 2012

**To: Will Frost
Habitat Biologist**

Subject: Old Harbor Airport Project

**From: Andy Dickerson
Environmental Scientist
Shearwater Systems**

On August 21st and 22nd 2012, I was assisted by Brian Wiebe and Ralph Christiansen of Shearwater Systems in Old Harbor to conduct the fourth sampling effort for the presence of fish in the streams that may be impacted by the proposed Old Harbor Airport runway extension project. Previous efforts were conducted in May, June and July of 2012.

We utilized the electrofisher to sample an unnamed stream (“Stream #2”) that flows into Stream No. 258-52-10012 (Figure 1). This stream was sampled during the May, June and July efforts. We began where the stream flows into the the specified water body and worked upstream approximately 600 linear feet. We captured 24 coho ranging in size from 25-30 millimeters and 13 dolly varden ranging in size from 25-80 mm. GPS waypoints were collected at where we started, finished and where we captured and released fish (Figure 2).

We continued sampling Stream No 258-52-10012 (“Stream #3”). We began approximately 200 feet downstream of the culvert and worked upstream approximately 1,800 linear feet (Figure 2). We captured and released 29 Dolly Varden ranging in size from 40-100 mm and 22 coho that were approximately 20-70 mm. All of the coho were at the starting point.

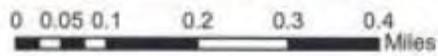
Sculpin Creek (north side of runway) was sampled. We began sampling where Sculpin Creek flows into Midway Bay and worked upstream approximately 850 linear feet (Figure 3). We captured and released 18 juvenile coho ranging in size from 30-80mm, 26 Dolly Varden ranging in size from 25-150 mm and 23 sculpin ranging in size from 25-150mm.

A tentative meeting is set up for the second week in September to review alternatives for stream relocation on site with the local Alaska Fish & Game Habitat Biologist.

Figure 1. Stream Locations at the Old Harbor Alaska Airport



Figure 1.



ADF&G



Figure 2. GPS Points for Stream #2 and #3 at the Old Harbor Airport Project



250 125 0 250 Feet



Figure 3. GPS Points for Sculpin Creek at the Old Harbor Airport Project





Figure 4. Sampling in Stream #3 – Dolly Varden



Figure 5. Sampling in Stream #2 Showing Small Pool Below ATV Trail



Figure 6. ATV Area just east of Stream #2 – Potential Sedimentation Source



Figure 7. Sampling in Stream #2 Near ATV Area





THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

**Department of
Fish and Game**

DIVISION OF HABITAT
Central Region Office

333 Raspberry Road
Anchorage, Alaska 99518-1565
Main: 907.267.2342
Fax: 907.267.2499

FISH HABITAT PERMIT FH 12-II-0211

ISSUED: September 21, 2012
EXPIRES: January 31, 2013

Kristi McLean
R&M Consultants
9101 Vanguard Drive
Anchorage, AK 99507

For

Shearwater Systems, LLC.
215B Main Street
Milford, OH 45150

Dear Ms. McLean:

Re: Vehicle Crossing – Sculpin Creek
Sections 21, T. 34 S., R. 25 W., S.M.

Pursuant to AS 16.05.841 (Fishway Act), the Alaska Department of Fish and Game, Division of Habitat has reviewed your proposal to place logs and slash (puncheon) into “Sculpin Creek”.

Project Description

The purpose of the puncheon in the creek is to move a tracked Nodwell-mounted CME drill rig to the north side of Sculpin Creek to conduct geotechnical surveys for the proposed Old Harbor Airport runway expansion. The puncheon will be placed at the site of a future temporary road crossing. The puncheon will be used to protect the streambanks while the equipment is moved across the stream. The puncheon will consist of logs and slash that will fill the stream channel to a depth of three feet. Sculpin Creek is about 5-foot wide. The equipment will make up to two crossings per day, for up to five days. The puncheon will be removed at the end of the project. The work will occur between October 2012 and January 2013.

Fish Resources

Sculpin Creek supports juvenile coho salmon and resident Dolly Varden, as well as sculpin. Your project as proposed has the potential to obstruct the efficient passage and movement of fish. Sculpin Creek has been nominated to the Anadromous Waters Catalog.

Fishway Act

In accordance with AS 16.05.841, project approval is hereby given subject to the project description above and the following stipulations:

1. Stream crossings shall be made from bank to bank in a direction substantially perpendicular to the direction of stream flow.
2. Upon project closure, all puncheon shall be completely removed from the natural streambed prior to demobilizing from the project area.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. For any activity that significantly deviates from the approved plan, you shall notify the Division of Habitat and obtain written approval in the form of a permit amendment before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Division of Habitat. Therefore, it is recommended you consult the Division of Habitat immediately when any deviation from the approved plan is being considered.

For the purpose of inspecting or monitoring compliance with any condition of this permit, you shall give an authorized representative of the state free and unobstructed access, at safe and reasonable times, to the permit site. You shall furnish whatever assistance and information as the authorized representative reasonably requires for monitoring and inspection purposes.

This letter constitutes a permit issued under the authority of AS 16.05.841 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Division of Habitat; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. The Division of Habitat reserves the right to require mitigation measures to correct disruption to fish and game created by the project and which was a direct result of the failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

Any questions or concerns about this permit may be directed to Habitat Biologist Will Frost at 267-2813 or emailed to william.frost@alaska.gov.

Sincerely,

Cora Campbell, Commissioner

A handwritten signature in black ink, appearing to read "Michael J. Daigneault". The signature is written in a cursive, flowing style.

By: Michael J. Daigneault
Regional Supervisor
Central Region Office

cc: AWT, Kodiak

ecc: L. Van Daele, ADF&G
B. Piorkowski, ADF&G
D. Tracy, ADF&G
A. Ott, ADF&G
S. Schrof, ADF&G
B. Cassidy, KIB
USACE, Regulatory Branch



STATE OF ALASKA
DEPARTMENT OF FISH AND GAME
P.O. BOX 115525
JUNEAU, ALASKA 99811-5525

Permit #: SF2012-214

Expires: 12/31/2012

Collections Report Due: 1/31/2013

FISH RESOURCE PERMIT
(For Scientific/Educational Purposes)

This permit authorizes Andy Dickerson (whose signature is required on page 2 for permit validation)
person

of Shearwater Systems LLC at 2207 Denali St. Suite 100, Anchorage 99503
agency or organization address

to conduct the following activities from May 11, 2012 to December 31, 2012 in accordance with AS 16.05.930:

Purpose: To conduct an environmental assessment prior to airport construction

Location: Big Creek near Old Harbor Airport

Species Collected: Local fish

Method of Capture: Minnow trap, dip net, backpack electrofisher (see Stipulation #7)

Final Disposition: ≤50 of each species at each trapping site may be captured, identified and released alive.
≤2 individuals of each unknown species may be killed and saved for later identification.
Unintended mortalities must be recorded and returned to capture site waters.

-Continued on Back-

COLLECTIONS REPORT DUE January 31, 2013. The report, using a data submission form furnished by ADF&G), shall include ALL species, numbers, dates, and locations of collection (datum/GPS coordinates in the decimal degrees format (dd.ddddd)) and disposition, and if applicable, sex, age, and breeding condition, and lengths and weights of fish handled. It must also include the date/time the local biologist was contacted for final authorization to carry out collecting activities. A completion report (abstract, background, methods, data, analysis), if not submitted with the collection report described above, must be submitted to the FRP program coordinator by: June/2013. Data from such reports are considered public information. The report shall also include other information as may be required under the permit stipulations section.

GENERAL CONDITIONS, EXCEPTIONS AND RESTRICTIONS

1. This permit must be carried by person(s) specified during approved activities who shall show it on request to persons authorized to enforce Alaska's fish and game laws. This permit is nontransferable and will be revoked or renewal denied by the Commissioner of Fish and Game if the permittee violates any of its conditions, exceptions or restrictions. No re-delegation of authority may be allowed under this permit unless specifically noted.
2. No specimens taken under authority hereof may be sold or bartered. All specimens must be deposited in a public museum or a public scientific or educational institution unless otherwise stated herein. Subpermittees shall not retain possession of live animals or other specimens.
3. The permittee shall keep records of all activities conducted under authority of this permit, available for inspection at all reasonable hours upon request of any authorized state enforcement officer.
4. Permits will not be renewed until the department has received detailed reports, as specified above.
5. UNLESS SPECIFICALLY STATED HEREIN, THIS PERMIT DOES NOT AUTHORIZE the exportation of specimens or the taking of specimens in areas otherwise closed to hunting and fishing; without appropriate licenses required by state regulations; during closed seasons; or in any manner, by any means, at any time not permitted by those regulations.

Bob Reinhardt
Fish Resource Permit Coordinator
Division of Sport Fish

W. Qui Cas
Director
Division of Sport Fish

5/11/12
Date

SF2012-214 continued (page 2 of 2)

Authorized Personnel: The following persons may perform collecting activities under terms of this permit:

David Burns, Andy Dickerson, Richard Wiebe

Employees and volunteers under the direct supervision of, and in the presence of, one of the authorized personnel listed above may participate in collecting activities under terms of this permit.

Permit Stipulations:

- 1) The local Area Management Biologist (AMB), **Donn Tracy** (486-1880; donn.tracy@alaska.gov) Kodiak, must be contacted for final authorization **prior** to you engaging in any collecting activities. The time/date of this contact must be included in your collections report (using the "data submission form" furnished by ADF&G). This AMB has the right to specify methods for collecting, as well as limiting the collections of any species by number, time and location.
- 2) An instance of >10% unintended collecting mortality requires sampling at a site to cease and the AMB contacted.
- 3) Each piece of unattended sampling gear must be; 1) labeled with the permittee's name, telephone number, and permit number, 2) securely tied to substrate, 3) placed in a location where they will not be easily noticed (e.g. under cut banks, in pools away from roads or trails), 4) soak no more than twenty-four hours at a time, 5) located with GPS coordinates, and 6) accounted for/ removed at the conclusion of sampling.
- 4) Salmon eggs used as bait in traps must either be; sterilized commercial eggs or, if raw, be disinfected prior to use. A 10-minute soak in 1/100 Betadine solution or some other iodophor disinfectant is adequate.
- 5) Gloves, boots, and collecting gear should be disinfected between streams to reduce the potential of pathogen transmission. A wash/rinse in 1/100 Betadine solution is adequate.
- 6) If anadromous fish species new to permitted streams and rivers are found, the permit holder will work closely with ADF&G to see that information is included in the database for the *Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes*. Anadromous fish include *Oncorhynchus spp.*, Arctic char, Dolly Varden, sheefish, smelts, lamprey, whitefish, and sturgeon. Please direct questions to J. Johnson, 267-2337 or j.johnson@alaska.gov
- 7) Electroshocking is currently discouraged, but not prohibited. Electroshockers may not be used in anadromous waters in the presence of adult salmonids including trout or char. In areas where other means of capture are not feasible, only one pass is allowed. All electroshocked fish should be monitored before release with mortalities or injuries reported on the data submission form. Crew Leaders must have proof of attending formal class/field training along and ten days of electroshocking experience while crew members should have formal training.
- 8) **Atlantic salmon** and other **non-native invasive aquatic species** that you encounter during your sampling should be killed. In such an event please contact the nearest AMB (**Stipulation #1**) ASAP with species identification or description, capture location or location of sighting if capture is not possible, number captured, size, and sex. Preserve and turn in the whole specimen to the nearest ADF&G office.
- 9) *A copy of this permit, including any amendments, must be made available at all field collection sites and project sites for inspection upon request by a representative of the department or a law enforcement officer.*
- 10) Issuance of this permit does not absolve the permittee from compliance with any and all other applicable federal, state, or local laws, regulations, ordinances including securing permissions to trespass on controlled lands.
- 11) A report of collecting activities, referenced to this fish resource permit number, must be submitted to the Alaska Department of Fish and Game, Division of Sport Fish HQ, P.O. Box 115525, Juneau, AK 99811-5525, Attention: Bob Piorkowski (465-6109; Robert.Piorkowski@alaska.gov), and to the AMB (**Stipulation #1**) within 30 days after the expiration of this permit. This report must summarize the number of fish captured by date, by location (provide GPS coordinates and datum), and by species, and the fate of those fish. Fish length, weight, sex, and age data should be included if collected. A completion report (abstract/background/methods /data/analysis), if not submitted with the collection report described above, must be submitted to the department within six months of the expiration of the permit. Data from such reports are considered public information. A report is required whether or not collecting activities were undertaken.

PERMIT VALIDATION requires permittee's signature agreeing to abide by permit conditions before beginning collecting activities:

Signature of Permittee

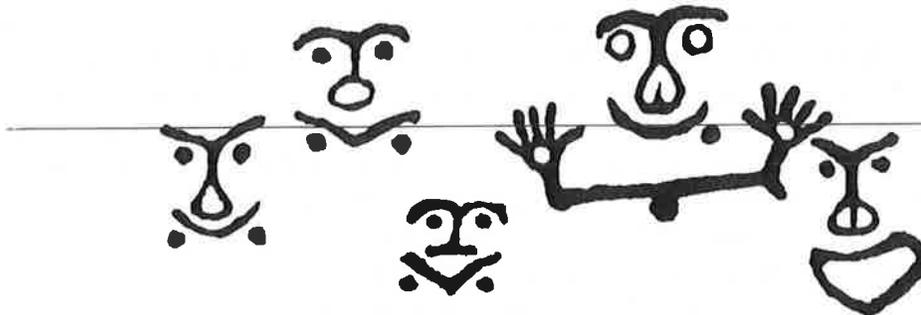
cc: Donn Tracy, Division of Sport Fish, Kodiak
Steve Schrof, Division of Commercial Fisheries, Kodiak
Mike Daigneault, Division of Habitat, Anchorage
Fish and Wildlife Protection, Kodiak

**Archaeological Investigations for the
Old Harbor Airport Extension Project,
Kodiak Island, Alaska**

Report prepared for Old Harbor Native Corporation

by

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August 2012

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EXECUTIVE SUMMARY

In June of 2012, Alutiiq Museum archaeologists conducted a three-day archaeological survey in the community of Old Harbor, Kodiak Island, Alaska. The project was designed to assist the Old Harbor Native Corporation with the location and evaluation of cultural properties in advance of construction related to the expansion and improvement of the community airport. This work was required under the National Historic Preservation Act. Specifically, archaeologists sought to locate and evaluate four known prehistoric sites (KOD-478, KOD-580, and KOD-574, and an unnumbered site), and to survey project areas for undocumented sites. This report provides background information for the project, summarizes the museum's field methods, discusses finds, and offers recommendations for site management. During the survey, the crew located four archaeological sites, three known prehistoric properties and one previously undocumented site. A fifth site, reported in 1984 but not numbered, was not relocated. Tests in the purported site location produced no evidence of cultural activity.

KOD-478 is a prehistoric deposit at tip of the peninsula and at the far northeastern end of the project area. This site contains six structure depressions and shell midden deposits dating to the late prehistoric Koniag tradition (ca. 500 years old). The site is in good condition with substantial, intact, three-dimensional features and organic preservation. KOD-580 also lies on the peninsula, though at its western end. Here, subsurface testing revealed a settlement dating to either the Ocean Bay II or Early Kachemak tradition. A new site (KOD-1131), located on the southern coast of the peninsula between KOD-478 and KOD-580, contains evidence of Kodiak's most ancient foragers. Here layers of red ochre and charcoal deposits as well as culturally mixed soils, suggest a small, but intact Ocean Bay I deposit. Finally, KOD-574 lies at the southwestern end of the project area, at the western end of the current runway. This site contains a heavily bermed, single-roomed, structure suggestive of the Late Kachemak tradition.

Examination of the sites in relation to proposed construction areas indicates that the three sites on the peninsula, KOD-478, KOD-580, and KOD-1130, lie in areas where significant construction activity will occur. As planned, construction will remove, alter or bury all of these deposits to create a foundation for the new runway. Each of these sites has intact stratigraphic deposits likely to produce important information on local prehistory. As such, they are all likely eligible for inclusion in the National Register of Historic Places under Criterion D. In contrast, KOD-574 lies within the project area but beyond the projected area of ground disturbance under Alternative 1, the currently pursued construction plan. Although KOD-574 is also likely eligible for National Register nomination, no further investigation is recommended at this site. If the proposed construction proceeds with Alternative 1 as planned, this site will not be disturbed.

In light of this information, the Alutiiq Museum recommends that mitigation measures be planned for KOD-478, KOD-580, and KOD-1130 to address the adverse impacts of construction. Additionally, we recommend that an archaeologist monitor soil removal on the peninsula. This will insure that any unidentified sites in this deposit rich area can be identified and assessed.

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INTRODUCTION

The Old Harbor Native Corporation (OHNC), an Alaska Native village corporation, is in the process of expanding and enhancing airport facilities in the community of Old Harbor, Kodiak Island, Alaska. The Old Harbor Airport Extension Improvement project will lengthen the current gravel airstrip by 2,000 feet and double its width to support cargo planes. It will also alter surrounding topography to reduce aircraft turbulence (Shearwater Systems LLC, n.d.). As the project will involve assistance from the U.S. Department of Defense Innovative Readiness Training (IRT), it is considered a federal undertaking. Consequently, OHNC must complete an environmental assessment. This includes identifying, evaluating, and mitigating any negative impacts to cultural properties in the project area as specified by the National Historic Preservation Act.

In 2011, OHNC hired the U.S. Army Corps of Engineers (USACE) to prepare a project environmental assessment, including an evaluation of cultural properties. This work resulted in a brief archaeological survey by USACE archaeologist Aron Wilson (Wilson 2011). Unfortunately, Wilson died before completing a project report and his reconnaissance proved insufficient for project needs. In reviewing USACE finds (Salyer 2011) and project plans (USACE 2012), the Alaska State Historic Preservation Officer (SHPO) (Bittner 2011) noted a need to expand the survey to review additional project areas and complete determinations of eligibility for four known prehistoric sites in the vicinity.

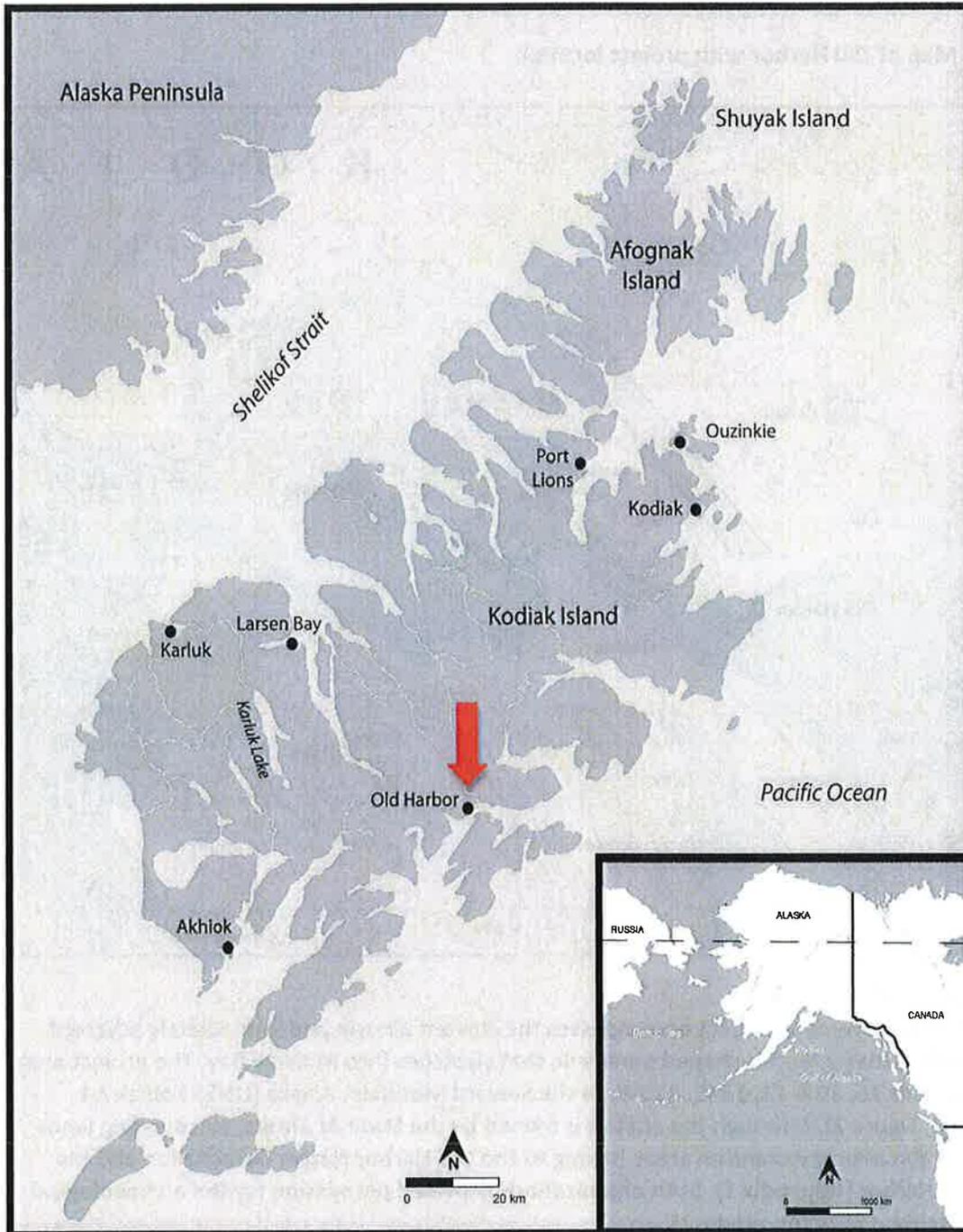
To complete this additional archaeological assessment, OHNC contracted with the Alutiiq Museum & Archaeological Repository. This Kodiak based cultural center maintains a staff of professional archaeologists experienced in both Kodiak prehistory and cultural resource management. The Alutiiq Museum conducted survey and testing for the Old Harbor airport project in June of 2012. This report summarizes their work. It provides a description of the fieldwork undertaken, the sites located, and the relationships between cultural properties and project areas. It is intended to assist the corporation in meeting its responsibilities for the care of cultural properties under section 106 of the National Historic Preservation Act and its implementing regulations.

PROJECT AREA

The Alutiiq village of Old Harbor lies on the eastern coast of Alaska's Kodiak Island about 113 km from the City of Kodiak (Figure 1). Surrounded by wilderness and accessible only by boat or air, the community stretches along the shore of Sitkalidak Strait. This narrow waterway forms a protected passage between Kodiak Island to the north and west, and Sitkalidak Island to the south and east (Figure 2). Old Harbor lies in lee of Sitkalidak Island, on the northern shore of Sitkalidak Passage. The community overlooks the narrowest part of the strait. To the east, lies Midway Bay, a small marine estuary fed by a collection of unnamed streams that coalesce at its head. To the west of Old Harbor, Sitkalidak Strait widens and provides access to a set of productive bays. These include Barling Bay, Three Saints Bay, Kaiugnak Bay, and Kiavak Bay on

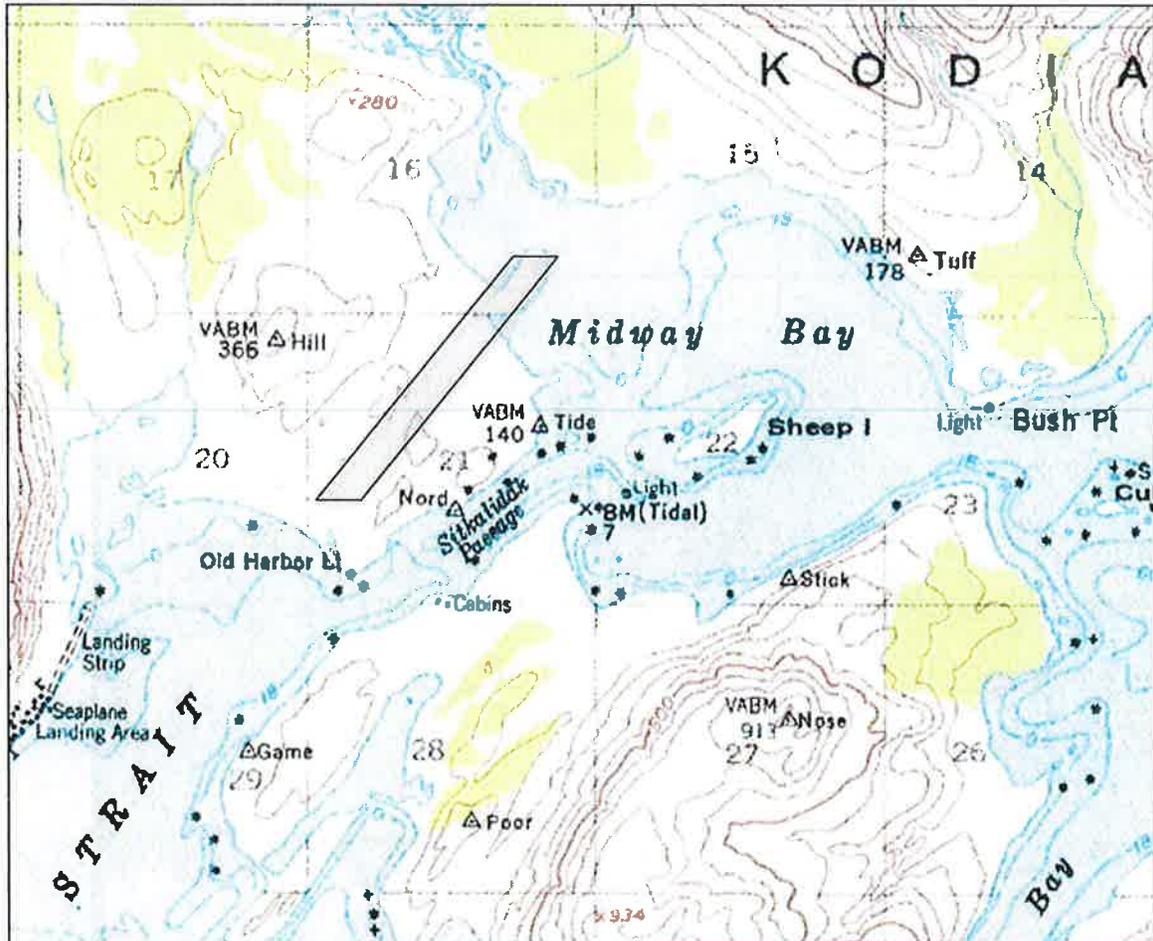
Kodiak Island, and Newman Bay, Natalia Bay, and Rolling Bay on the southwest coast of Sitkalidak Island. Today Old Harbor is home to 208 people. About 90 percent are of Alutiig descent (Alaska Department of Commerce 2012).

Figure 1. Location of Old Harbor



The project area lies on northeastern end of the Old Harbor community (Figure 2). This is the newest part of the village, with two housing complexes. Here, the current airstrip rests in an upland area, set against the southeastern edge of a hill that rises to 366 ft. The community landfill lies on the side of this hill, accessed by a gravel road that run roughly parallel to the airstrip below and its gravel access road (Figure 3).

Figure 2. Map of Old Harbor with project location



The airport improvement project encompasses the current airstrip and immediately adjacent areas. This includes a thumb-shaped peninsula that stretches into Midway Bay. The project area falls in Sections 16, 20 & 21, T34S, R25W, of the Seward Meridian, Alaska (USGS Kodiak A4 quadrangle; Figure 2). Although the airstrip is owned by the State of Alaska, surrounding lands included in the airport expansion areas belong to the Old Harbor Native Corporation and the City of Old Harbor (Appendix 1). Both organizations provided permission for the archaeological survey described here (Appendix 2).

Throughout the project area, the topography is low and rolling, with elevations of about 100 ft (31 m) or less. To the northwest, a low hill rises to over 300 ft (93 m) above sea level. Ocean waters flank the project's northeast and southwest ends, and are no more than a kilometer from its southeastern limit. The shore of the region is rocky. Outcrops of Kodiak's granitic bedrock are interspersed with small, narrow gravel beaches. The most prominent topographic feature in the project area is a sizeable peninsula that stretches into Midway Bay (Figure 3). This thumb-like landform at the northeastern end of the project area offers a commanding view of both the stream delta at the head of the bay and surrounding ocean waters in Sitkalidak Strait. Just beyond the southwestern end of the project area, there is a small bight. Observation by the museum's field crew suggests that this is the remnant of a small lagoon, backed by old gravel beach ridges. Today, a community road runs along the southern end of the project area. This gravel road provides access to a housing complex and to the gravel access leading to the airport (Figure 3).

Figure 3. Aerial view of project area



The region is not forested, but contains a dense cover of brush, herbs, grasses and moss. This plant life includes cottonwood, willow, dwarf birch, cow parsnip, salmonberry, Nootka rose,

fireweed, lupine, iris, yarrow, wild geranium, and a verity of ferns. In the project area, brush is particularly dense around the eastern half of the airstrip, with more open areas at either end of the project area - on the peninsula and around the bight.

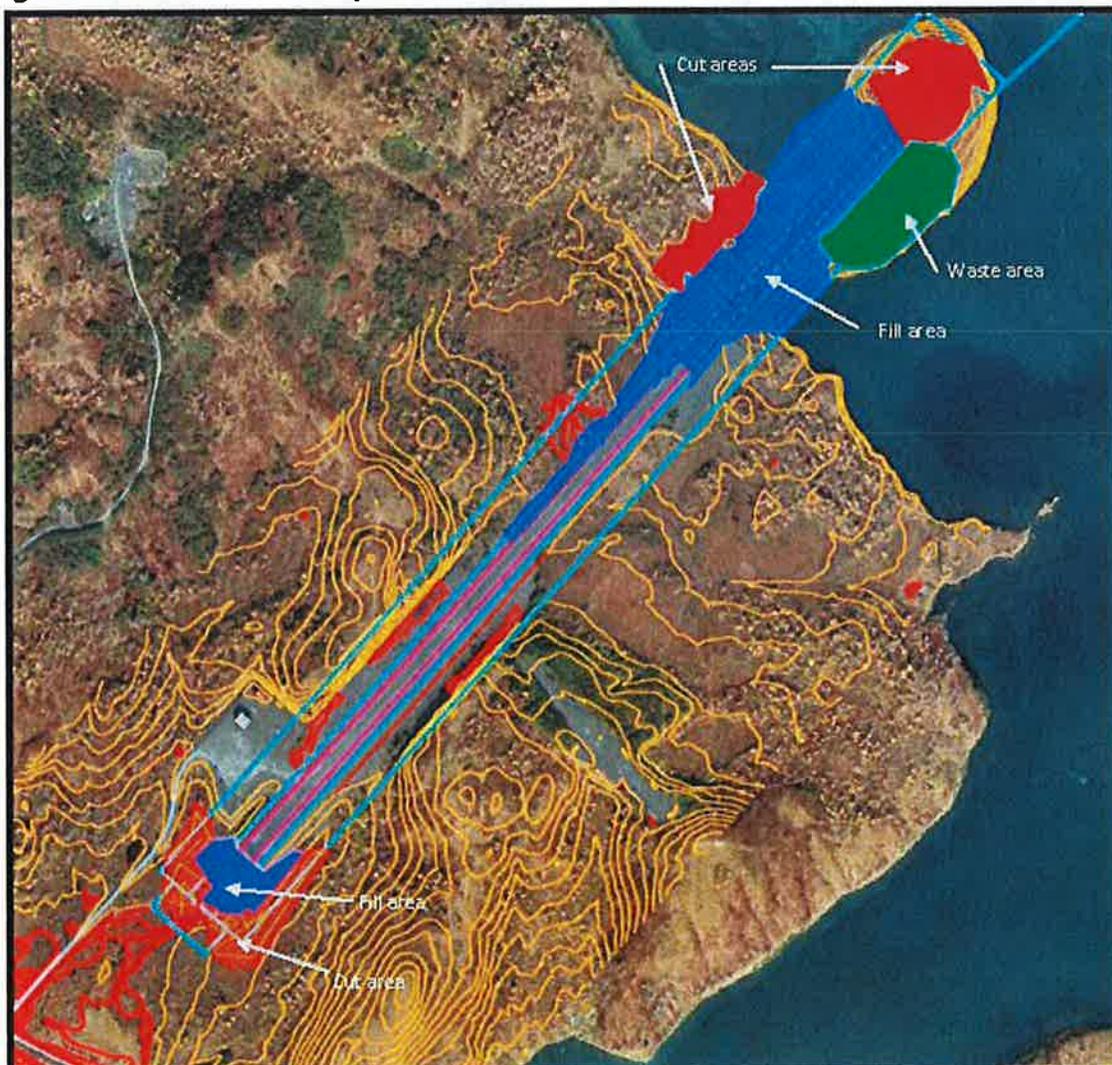
The Old Harbor Native Corporation is leading the airport expansion project in collaboration with its subsidiary, Shearwater Systems, LLC. Project planning documents indicate that there are four possible reconfigurations for the runway. Three of these configurations (Alternative 1, 3, and 4) involve lengthening the runway to the northeast, away from the present housing complexes and on to the peninsula that juts into Midway. The fourth configuration, Alternative 2, would extend the runway southwest toward the community of Old Harbor and the bight, between the existing housing complexes. In all four configurations, lands immediately surrounding the runway will be leveled to reduce turbulence.

Alternative 1, which lengthens the current runway northeast in its present alignment, is the preferred alternative, and the one currently pursued. Figures 4 and 5 illustrate the proposed construction activities associated with this configuration. First, the airstrip will be extended about 2,000 ft (610 m) to the northeast, and widened from 250 ft to 500 ft (76 to 152 m) (Salyer 2011). Light blue lines show the footprint on the proposed strip. Under this configuration, the strip will nearly cover the peninsula. All but the very tip of the peninsula will be affected. To facilitate this work, construction crews will excavate nearly 500,000 cubic yards of material from the rock embankments on either side of the airstrip both to obtain materials for construction and reduce aircraft turbulence (Figure 5). This material will be placed along a 2,000 ft (610 m) corridor extending the path of the runway at its northeast end, a 750 ft (228 m) corridor at its southwest end, and portions of the current runway's sides. According to discussions with Shearwater Systems representatives, the soils capping the peninsula in the runway corridor will be removed and replaced with this rock fill to create a stable foundation (Figure 4 - dark blue areas). Other areas will be substantially cut to level the area before filling (Figure 4 - areas in red). In addition to creating the runway, the project will cut back some of the topography on either side of the runway to reduce turbulence. Figure 6 shows the planned earthwork in this area.

CULTURAL HISTORY

The cultural history of Kodiak is well known with over 80 years of archaeological inquiry contributing to current understanding. Archaeologists now recognize three related, prehistoric cultural traditions, Ocean Bay, Kachemak, and Koniag (Table 1), and believe that the Island's material record indicates continuity between these traditions. Over time, Kodiak's foraging societies grew, technologies changed, and people harvested local resources with increasing intensity and efficiency. Ultimately, this process resulted in the development of the populous, socially complex Alutiiq societies recorded at historic contact. A brief review of these prehistoric cultural traditions follows. Readers are referred to the following sources for more detailed information on Kodiak prehistory (Black 2004; Clark 1974, 1979, 1984; Crowell et al. 2001; Fitzhugh 2003; Knecht 1995; Steffian et al. 2006).

Figure 4. Alternative 1 runway construction



Preliminary Runway Extension Plan

File No:

WATERWAY:

PROPOSED ACTIVITY: Extend runway to 4700 feet

Sec. 21, T. 34S, R. 25W

Lat: 57°13'8.98"N

Long: 153°16'5.95"W

Sheet __ of __

Date: 04/05/21012

Figure 5. Alternative 1 other construction



Archaeologists believe that people arrived on Kodiak from the west and were fully equipped to harvest food and resources from the sea. These early settlers are assigned to the Ocean Bay tradition, a way of living that spans from about 7,300 to 4,000 years ago. For nearly three millennia people of this tradition hunted and fished from relatively small coastal settlements, trading occasionally with their neighbors.

Sites of the Ocean Bay I phase of the tradition (5500 BC – 3000 BC) are distinctive, often containing conspicuous layers of reddened earth from the use of naturally occurring ochre, perhaps to tan hides. Early Ocean Bay sites also contain an abundance of chipped stone tools including microblades, points, and knives. Some are made from non-local materials, obtained from the mainland. However, Kodiak’s locally available red chert was widely used suggesting only limited trade. Houses of this era are not well known, but research by the Alutiiq Museum suggest that Ocean Bay people built structures by stacking blocks of sod to form walls. By about 5,000 years ago, people of the Ocean Bay began to grind slate extensively, fashioning a variety of slender bayonets and broad knives from Kodiak’s hard black slate. This marks the start of the Ocean Bay II phase. Bayonets appear at both fishing and hunting locales, suggesting they were widely used harvesting tools. Housing of this time period include some of the first true semi-subterranean structures, with sod roofs, simple entrances, and small slate slab hearths. People also built more temporary structures using slate slabs to create a low circular wall possibly covered with hides.

Table 1. Cultural traditions of the Kodiak Archipelago

Tradition	Phase	Date
Ocean Bay	Ocean Bay I	5500 BC to 3000 BC
	Ocean Bay II	3000 BC to 2000 BC
Kachemak	Early Kachemak	2000 BC to 700 BC
	Late Kachemak	700 BC to AD 950
	Transitional Kachemak	AD 950 to AD 1300
Koniag	Early Koniag	AD 1300 to AD 1500
	Developed Koniag	AD 1500 to AD 1763
Alutiiq	Russian	AD 1763 – AD 1867
	American	AD 1867 to the Present

Over time, Kodiak residents developed new harvesting, butchering, and processing technologies and began to fish more intensively. This marks the beginning of the next cultural tradition, known as the Kachemak (2000 BC – AD 1300). During the Kachemak tradition, intensified fishing practices led to increases in food storage and a reduction in mobility. Early Kachemak sites (ca. 2000 BC – 700 BC) are filled with pits containing charcoal and fire cracked rock. They suggest that residents focused on processing food for later use, rather than harvesting for immediate need. This activity created stockpiles of food and reduced movement around the landscape. Evidence of trade is limited, suggesting that people focus on harvesting local resources, rather than exchanging materials with neighbors – both within and beyond the Kodiak region. Single roomed sod structures continued to be a primary form of dwelling, and

are very similar in construction to those of the preceding Ocean Bay II phase. Communities grew over the span of the Kachemak tradition as people moved their settlements less, creating larger, more permanent villages. The first sizeable villages appear on Kodiak about 2,000 years ago. Collections of single-roomed sod house structures, surrounded by small storage buildings, suggest that people lived in nuclear family groups. Many of these houses had entrance tunnels designed to trap warm air in the house, benches for sitting and sleeping, and a selection of clay-lined pits and cooking features surrounding a central hearth. Over the course of the tradition, trade with neighboring areas increased dramatically. Kodiak Islanders obtained coal, antler, ivory, and volcanic stone in great quantities from the mainland, and used these materials to manufacture items on Kodiak. Sites of this time are filled with debitage, preforms and finished items of these non-local materials suggesting ready access to the mainland. Items made from these materials included a variety of jewelry – labrets, beads, pins and pendants, as well as small carvings. The first signs of territoriality and warfare also appear in the Late Kachemak (700 BC – AD 1300), perhaps in response to increased competition for resources among members of a growing population. Fort sites, evidence of butchered human remains, and a filling of the landscape with settlements suggest increasing competition. Similarly, the appearance of petroglyphs, ossuary style burials in village sites, and regional styles of jewelry signal an increasing concern for social space. People of this era appear to have been advertising their affiliation with social groups and places on the landscape to insure access to resources in an increasingly competitive environment.

The final prehistoric era is the Koniag tradition (AD 1300 to AD 1764). This era is characterized by heightened ritual and the development of a ranked society. During the Koniag era, families began working together to harvest, process, and store resources in massive quantities—fish and whales were among the most important. Leaders emerged to manage labor and stores, and held elaborate winter festivals to demonstrate their wealth and power.

Archaeologically, these changes appear in the size and configuration of settlements. Large settlements, with more houses, and a greater variety of structures appear in the archaeological record. Alutiiq people began building multi-roomed dwellings capable of housing extended families and quantities of stores. Items once processed and stored in sheds are now processed and stored inside large houses. Moreover, large permanent villages appear in new settings – particularly the inland banks of Kodiak’s major salmon rivers. For the first time Alutiiqs appear to have spent a significant portion of the year living away from the coast. Similarly, there are changes in technology. Alutiiq people began building stone weirs and developed a new form of harpoon to spear salmon trapped behind these structures. Pottery vessels for cooking and storing foods appear, and larger woodworking tools for building larger houses. A hallmark of this tradition is the presence of community dwellings, large buildings used as central meeting places, and a setting for winter festivals. One exceptionally preserved Koniag tradition site, held examples of the ceremonial gear used in winter festivals. Rattles, drums, masks, and feast bowls were among the finds. Accompanying ceremonial gear are items of personal adornment that suggest a heightened concern for displays of wealth and status.

Each of these prehistoric cultural traditions is well represented in the archaeological record of

eastern Kodiak Island, known from both survey and excavation data from a variety of sites found in coastal settings – including nearby Sitkalidak Island, Three Saints Bay, and the coast of Sitkalidak Strait surrounding Old Harbor.

In the late 1700s Russian fur traders arrived in the Kodiak Archipelago. Western settlers brought disease and trade goods to Native people, and create a new social and economic system. Many Alutiiqs died. Others were enslaved. Native culture changed dramatically during this era with the introduction of western goods, the Russian language, and the Orthodox faith. Some traditions disappeared rapidly, like the practice of wearing labrets. Others faded or were hidden from view. The lavish winter festivals of ancient times are one example. Russian era archaeological sites appear throughout the Kodiak region and include artels (work stations), seasonal harvesting camps, a brick kiln, and other Russian facilities.

In 1867 the United States purchased Alaska and additional cultural changes took place. The commercial fishing industry grew in the final decades of the nineteenth century leading to changes in the local economy and realignment of the Alutiiq population in relation to opportunities for wage labor. Canneries, wood-framed houses, and western goods are among the material correlates of this major cultural change. Other historic enterprises included fox farming, boat building, trapping, and mining.

PREVIOUS RESEARCH

All four alternatives proposed for the Old Harbor airport project will involve substantial ground disturbance in an area known to hold archaeological sites. Past archaeological surveys in the immediate project vicinity (Yarborough 1984, Fitzhugh 2003), and other work in adjacent areas of Old Harbor records the presence of numerous sites along the shores of Sitkalidak Passage (Clark 1965; Fitzhugh 2003; Hrdlička 1944).

Archaeologist Mike Yarborough completed the first survey in the project area for the Alaska Department of Transportation, as part of the environmental assessment work associated with the development of the present runway (Yarborough 1984). In October 1984, Yarborough conducted a walk over survey and shovel testing in areas slated for development. Work focused on the peninsula extending into Midway Bay, on the proposed runway centerline, along the banks of several ponds and creeks, and along the shores of the modern beach. This worked revealed historic materials (scattered lumber, nine telephone poles from 1974), as well as two prehistoric sites.

In the area above the bight, beside a small, unnamed creek, Yarborough discovered a 4 x 7 m oval depression resting in a complex of beach ridges. Three tests in this feature revealed a floor and recovered a hammerstone. Ben Fitzhugh reported this site to the AHRS in 1995. It is now known as KOD-574. In a test pit on the peninsula at the northeastern end of the project area, Yarborough recovered a slate lance and a piece of fire-cracked rock in a test pit. Although this find spot never received an AHRS site number, the style of the point suggested an Ocean Bay II affiliation and use of the project area more than 4,000 years ago. Yarborough also reported

finding a possible cache pit near the tip of the peninsula, although a test provided equivocal results and the feature did not receive an AHRS number.

In 1995 archaeologist Ben Fitzhugh surveyed the area as part of his broader study of settlement patterns in the region (Fitzhugh 2003). Although his work focused on Sitkalidak Island, collaboration with the community of Old Harbor provided an opportunity to survey and test coastal regions in the village. Fitzhugh found a variety of historic and prehistoric sites in the Old Harbor area. In the immediate vicinity of the current the runway project he described a settlement on the tip of the peninsula sticking into Midway Bay. Fitzhugh reported that KOD-478 contained four substantial multi-roomed depressions representing the remains of sod houses. Animal digging had damaged one of the structures, revealing deposits of sandy, charcoal flecked floor and a midden with cockle shells and fish bones. Fitzhugh dug a single test pit in the site's middle. Together, the data from the site suggest a small Koniag tradition village between 250 and 600 years old. Yarborough's reported cache pit appears to be near this site and might be an associated feature.

During his 1995 survey, Fitzhugh also found a previously unrecorded site, KOD-580. In a shovel test on the southwestern coast of the peninsula, he discovered a black, charcoal stained layer about 50-60 cm below the surface. This site rests on the neck of the peninsula, overlooking a small cove formed by the peninsula and the adjacent land. The stratigraphic position of the cultural deposits between the modern soil and weathered deposits of volcanic ash suggest that the site dates to the end of the Ocean Bay tradition or perhaps the succeeding Early Kachemak phase. Fitzhugh's (2003) work also showed that there are many additional sites in the broader area (see also Appendix 4). These lie beyond the immediate project foot print, but illustrate that prevalence of buried prehistoric and historic deposits in the region.

Together, Yarborough and Fitzhugh's surveys indicate that coastal regions of the project area have long been a locus of the settlement. Both the peninsula at the northeastern end of the runway and the bight beyond its southern terminus hold prehistoric sites, and together these deposits likely span Kodiak's known prehistoric era, from the Ocean Bay to the Koniag traditions. In contrast, inland regions of the project area have yet to reveal any prehistoric materials.

More recently, in September of 2011, USACE archaeologist Aron Wilson conducted shovel testing on the peninsula at the northeastern end of the project area (Wilson 2011). Documentation of his work is scant. A single page of field notes indicates that he dug five shovel tests, although their exact locations are not tied to landmarks or the locations of known sites (Appendix 3). Wilson provides one test pit profile and indicates that it is characteristic of all his tests. This profile shows a layer of modern soil resting on a light brown sediment (weathered volcanic ash), which in turn rests on regolith (glacial till). None of his tests produced cultural materials. Unfortunately, Wilson died in the winter of 2012, before he was able to develop a survey report. As such, there is no formal summary of Wilson's observations.

Based on Wilson's finds, and a map with site locations incorrectly plotted (USACE 2012; see Appendix 4) the USACE suggested that KOD-478, KOD-574, and KOD-580 lay beyond the

immediate impact of the proposed runway construction and therefore, that construction would have no adverse effect on these properties (Slayer 2011:3). However, the corps noted the possibility of finding undiscovered buried sites in the project area and recommended construction monitoring to preserve any such finds. They also recommended evaluating the eligibility of the known sites for nomination to the National Register of Historic Places.

The SHPO did not concur with the Corps' finding of no adverse affect (Bittner 2011), and noted the need for additional survey work and determinations of eligibility for known sites. OHNC hired the Alutiiq Museum to complete this work.

FIELD METHODS

The Alutiiq Museum's survey was designed to complete a more thorough evaluation of project areas likely to produce archaeological sites. The project had two central goals; (1) to relocated known sites and collect information suitable for determining their eligibility for nomination to the National Register of Historic Places, (2) to complete survey and testing of project areas to locate previously unidentified sites. Patrick Saltonstall, a registered professional archaeologist, curator of the Alutiiq Museum led the field research for this project.

In June of 2012, Saltonstall spent three full days in the project area, conducting a thorough investigation. Jill Lipka, a museum staff member and experienced field technician assisted Saltonstall. The crew visited Old Harbor from June 19th to June 21st, staying overnight at the Sitkalidak Lodge and meeting with representatives of Shearwater Systems, LLC in the field.

Fieldwork began with an introduction to project activities and areas with a Shearwater Systems engineer. Then Saltonstall and Lipka located KOD-478, the Koniag tradition settlement on the tip of the peninsula. Here they dug three test pits and used a tape and compass to map the site's surface features (Table 2). Testing focused on the southern area of the site, where disturbance from construction is most likely. Here the crew dug two of the test pits in structure depressions (TP1 and TP2), one in a multi-roomed structure, and one in a single-roomed structure (see Figure 8). The third test fell outside of the site in a depression that proved to a natural feature (TP3). During this work the crew recovered 2 samples of carbonized wood (Table 3), one from each structure. They collected no other materials.

Following work at KOD-478, Saltonstall and Lipka tested adjacent areas of the peninsula, in search of undocumented sites (Figure 6). This included two tests on the northern shore of the landform (TP4 and TP5), as well as tests on the southern shore of the peninsula and in the area where it joins the mainland. In an open area near the top of the peninsula, they noted the presence of refilled tests, which are likely those dug by USACE archaeologist Aron Wilson. Given the negative results of Wilson's testing, the crew chose not to dig additional tests here.

Table 2. Test Pit Summary

Date	TP	KOD-	HP	Feature	Top	Depth cm	Description	Samples/ Artifacts	Profiles in cm	Site Vegetation	GPS Coordinates
19 June 2012	1	478	1	Single	65 x 65	37	Single-room, 3 x 3 m, no pits w/entrance tunnel	Charcoal 9-14 in FCR below sod	0-9 Sod 9-14 FCR, Charcoal stained soil w/flecks of charcoal 14-37 In-situ weathered ash 37 Glacial till	Minimal: Salmonberry, Fireweed, Moss, Grass, Geranium	N57°13.498' W153°15.536' +/- 32 ft
	2	478	2	Multi	65 x 65	50	Multi-room w/single side room	Charcoal 19-25 in black & FCR below sod	0-19 Sod 19-22 Brown soil 22-25 Charcoal stained soil & FCR 25-42 Weathered ash (few flecks of charcoal) largely sterile mixed w/rock 42-50 In-situ ash & rock - compact	Minimal: Salmonberry, Fire, Grass, Fern	N57°13.504' W153°15.502' +/- 29 ft
	3	478	3	N/A	60 x 60	78	Tested to determine if flat area might be a sod borrow - however, no cultural layers were observed (stopped on sterile)	None	0-15 Well developed Sod 15-20 Well developed dark soil 20-78 Cryoturbated in-situ weathered ash	Absent: Fireweed, Grass	N57°13.506' W153°15.586' +/- 16 ft
	4	N/A	N/A	N/A	65 x 65	40	Flat area on small rise ca. 20 m above water on north side of knoll, No patterned ground, located 2 m from Shearwater benchmark, No cultural deposits observed	None	0-13 Sod 13-39 Weathered ash w/some pebbles 39-40 Gravelly sandy outwash	Absent: Fireweed, Grass, Geranium	N57°13.481' W153°15.636' +/- 15 ft
	5	N/A	N/A	N/A	65 x 65	60	Lightly patterned ground on flat terrace ca. 10 m from shore below site on knoll	None	0-11 Well developed sod 11-30 Weathered mottled ash (indistinct transition) 30-46 Pebble-rich weathered ash 46-55 In-situ gold ash w/some pebbles	Absent: Fireweed, Moss, Grass, Yarrow	N57°13.395' W153°15.772' +/- 16 ft

11	N/A	N/A	N/A	60 x 60	54	deposits (not unlike TP10), nothing cultural observed	None	0-14 Sod / O horizon 14-54 Weathered in-situ ashes 54 (downward) Glacial till L1 = Sod, L2 = Brown "dirty" weathered ash w/occasional pebbles, L3 = Charcoal stained soil and gravel, L4 = Weathered bright orange w/charcoal "chunks" near top North Corner: (87cm BS) L1 = 0-17, L2 = 17-55, L3 = 55-62, L4 = 62-87 East Corner: (82cm BS) L1 = 0-12, L2 = 12-40, L3 = 40-55, L4 = 55-82 South Corner: (61cm BS) L1 = 0-13, L2 = 13-43, L3 = 43-56, L4 = 56-61 West Corner: (70cm BS) L1 = 0-10, L2 = 10-49, L3 = 49-56, L4 = 56-70	Iris, Cottonwood	N57°13.335' W153°15.806' +/- 31 ft
12	580	N/A	N/A	65 x 65	See Desc	In places an orangey ash 3-5 cm thick directly above L3, L3 extends up into L2 in places (?) collapsing roof (?), in NE side of pit swamp deposits w/rotted vegetation above till - very clay rich till	Samples for charcoal - water screen in lab: L3/L4 top = 4 samples Charcoal bits Bulk soil - Black LS 2 each bulk sample = 8cm into charcoal and gravel - fired tephra w/charcoal chunks	Absent: Fireweed, Moss, Grass, Geranium	N57°13.340' W153°15.731' +/- 23 ft	
13	1130	N/A	N/A	60 x 60	67	Flat area amongst cottonwoods on edge of clearing, testing for site on 5-10 m terrace east of KOD-580 ca. 200 m from TP12 (KOD-580) PGS - possibly OBI based on stratigraphy, red ochre on till w/charcoal (0-20 BS trowel, 20-60 cm BS shoveled out and hand troweled, red ochre troweled	Charcoal 66-67cm BS	Absent: Fireweed, Fern, Geranium, Deer Cabbage, Cottonwood	N57°13.636' W153°15.593' +/- 13 ft	
14	N/A	N/A	N/A	65 x 65	40	Flat area in middle of 5-10 m	None	0-12 Sod 12-22 "Dirty" weathered soil 22-39 In-situ weathered brown ash 39-62 Mixed/mottled weathered ash 62-66 Gold in-situ (?) ash 66-67 Ochre smeared till w/occas. charcoal flecks 0-13 Sod and tsunami deposit - grey silt	Absent:	N57°13.353' W153°15.612' +/- 23 ft

21 June 2012

14	N/A	N/A	N/A	65 x 65	40	terrace just east of small point, notable claylike silt tsunami deposit - well developed 3-4 cm in sod, No cultural deposits observed on erosion face below TP	None	0-13 Sod and tsunami deposit - grey silt 13-30 Weathered brown ash 30-40 Sandy till and large rocks	Fireweed, Moss, Grass, Yarrow, Fern, Geranium, Rose	N57°13.353' W153°15.612' +/- 23 ft
15	N/A	N/A	N/A	65 x 65	47	20 m from edge - inland from TP13 ca. 10 m separation between TPs	None	0-17 Well developed sod and soil 17-41 Weathered ash 41-47 Large rocks, discontinuous gold ash and till	Absent: Fireweed, Grass, Fern, Geranium, Cottonwood	N57°13.363' W153°15.598' +/- 18 ft
16	N/A	N/A	N/A	60 x 60	82	Located on 3m terrace with slight slope toward bank - same terrace as TP10, just west of end of 5-10 m terrace, ground east between TP16 and TP14 is STRONGLY patterned ground	None	0-17 Sod and well developed O horizon 17-37 Weathered ash soil homogeneous w/tsunami deposits 37-68 Weathered ash interspersed w/dark O horizons 68-82 Weathered ash glacial clay - clay-rich w/swamp plant remains 82 (downward) Hard grey glacial till	Absent: Fireweed, Moss, Grass, Geranium, Rose, Fern, Iris, Deer Cabbage	N57°13.343' W153°15.670' +/- 13 ft
17	N/A	N/A	N/A	50 x 50 Bank Cut	74	Cut back bank just past location of end of site - no site deposits, made a 50 x 50 cm cut into erosion face on bank below and ca. 8 m east along bank from TP12	None	0-16 Well developed sod w/lots of roots 16-34 Soil development "dirty" brown weathered ash 34-36 Weathered ash w/pebbles (? L5) 36-40 Weathered ash 40-45 Light brown coarse weathered ash (indistinct layer transition) 45-46 Pebbles and weathered ash 46-52 Weathered ash (indistinct layer transition)	Absent: Fireweed, Grass, Geranium, Cottonwood	N57°13.339' W153°15.721' +/- 30 ft

21 June 2012

18	KOD-580	N/A	N/A	70 x 70	47	3 m in willows at west end of terrace sloping down into wet area w/ATV trail, east of KOD-580	Slate 3 pcs collected 25cm BS	52-60 Gold ash 60-74 Glacial outwash 0-22 Sod - "dirty" soil 22-25 Soft O horizon with slate on top 25-47 Weathered brown ash 47 (downward) Till	Absent: Fireweed Grass, Will	N57°13.345' W153°15.744' +/- 24 ft
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Notes:

Cells highlighted in orange represents tests in archaeological sites.

OLD TP - Small and not backfilled, possibly Army Corp of Engineers - N57°13.430' W153°15.523' +/- 35 ft (see video notes)

Possible location of 1984 Yarborough TP N57°13.335' W153°15.838' +/- 26 ft - 20m west from our TP and Shearwater Systems benchmark (see video notes/photos)

Table 3. Survey Catalog

Accession No. AM711
Collection Old Harbor Airport Expansion Project Survey 2012
Date August 21, 2012

Catalog No.	Weight	Description	Material	Site	TP No.	HP	Other Provenience	Date	Excavator(s)	Comments
AM711:001	13.4 g	Sample	Charcoal	KOD-478	TP1	HP1	L1 in FCR below sod	19-Jun-12	PGS JHHL	Weighed in bag
AM711:002	12 g	Sample	Charcoal	KOD-478	TP2	HP3	L1 Black in FCR below sod	19-Jun-12	PGS JHHL	Weighed in bag
AM711:003	7.9 g	Sample	Charcoal	KOD-580	TP12	n/a	Black soil in feature	20-Jun-12	PGS JHHL	Weighed in bag
AM711:004	1038.5 g	Sample	Fired Tephra w/charcoal	KOD-580	TP12	n/a	8 cm into charcoal and gravel	20-Jun-12	PGS JHHL	Weighed in bag
AM711:005	1004.8 g	Sample	Fired Tephra w/charcoal	KOD-580	TP12	n/a	8 cm into charcoal and gravel	20-Jun-12	PGS JHHL	Weighed in bag
AM711:006	abt. 3800 g	Split Sample	Bulk Soil	KOD-580	TP12	n/a	Black living surface	20-Jun-12	PGS JHHL	Weighed in bags, 1892.5g + 393.9g + wet sample abt. 1500 g
AM711:007	133 g	Sample	Charcoal	KOD-1130	TP13	n/a	Charcoal and ochre on till	21-Jun-12	PGS JHHL	Weighed in bag
AM711:008	83.6	Worked Frag	Slate	KOD-580	TP18	n/a	On ash directly below Katmai	21-Jun-12	PGS JHHL	
AM711:009	20.9	Worked Frag	Slate	KOD-580	TP18	n/a	On ash directly below Katmai	21-Jun-12	PGS JHHL	
AM711:010	2.3	Worked Frag	Slate	KOD-580	TP18	n/a	On ash directly below Katmai	21-Jun-12	PGS JHHL	

Excavator's Initials: PGS = Patrick G. Saltonstall, JHHL = Jill H. H. Lipka

Figure 6. Location of test pits



Testing also included a search for the unnumbered site reported by Yarborough (1984). In the immediate location of Yarborough's test, which was identified during the survey, the crew dug a 1x1 m unit (TP6) on the highest point of topography. They also excavated 65 x 65 cm test on small knolls on either side of this topographic feature. All three tests were negative. Finally, to better understand the stratigraphy in this part of the peninsula, the crew also examined the profile of Yarborough's old test pit. No cultural horizons were observed.

On the second day of the survey, Saltonstall and Lipka revisited KOD-574 and KOD-580. At KOD-574 they created a sketch map with a tape and compass. However, they did not excavate any tests. Yarborough 1984 3 test pits proved that the site's circular depression was cultural and provided information on subsurface deposits. As such, there was no reason to create additional disturbance.

At KOD-580 the archaeologists excavated a single test (TP12) to collect additional information on the deposit. From this site they collected four samples, three carbon samples and one sediment sample (Table 3). They also created a sketch map of the site. This map includes the location of KOD-1130, a newly discovered site found in TP13 to the northeast. The survey ended with a walk over of inland project areas. The crew did not test in this area, as it proved to have a very low potential for sites. The area is hummocky with large areas of muskeg, has poor access to the ocean, and in many places, a dense cover of brush.

In total, the survey crew dug 18 test pits, all by hand and all were refilled. Only 4 of these tests were positive. The cultural materials collected included six carbon samples, a soil sample, and three pieces of worked slate (Table 3). All were placed in plastic zip top bags and labeled with site number (where known), test number, and other provenience information. Saltonstall kept notes in a field journal and Lipka used a standardized form to record the details of test pit. Both team members took digital photographs and Saltonstall shot digital video. Electronic copies of these files are appended to this report on a DVD.

Following fieldwork, the crew took the small collections from the survey back to the Alutiiq Museum for drying, cataloging, and storage (Table 3). This work has been completed. The cultural materials will be stored at the museum, with copies of all project documentation, as a loan from OHNC under museum number AM711. The new site was reported to the Alaska Office of History and Archaeology. It is listed on the AHRS as KOD-1130. This winter, the museum will submit samples of wood charcoal from KOD-478, KOD-580, and KOD-1130 to Beta Analytic for radiocarbon dating.

RESULTS

The three-day archaeological survey of the Old Harbor airport area revealed additional information on three known sites (KOD-478, KOD-574, and KOD-580), and identified a fourth, previously unknown site KOD-1130. However, museum archaeologists were not able to locate an unnumbered site identified by Yarborough. Each of these sites is described below. No additional site information was discovered in the walkover survey of project areas.

KOD-478

USGS Kodiak A4, T34S, R25W, NW-SE-SE, Section 16, Seward Meridian
Land owned by the Old Harbor Native Corporation

On the peninsula jutting into Midway Bay, Alutiiq Museum archaeologists found three sites with intact prehistoric deposits (Table 4), two known and one previously unrecorded. The largest is KOD-478. Although a map developed by the USACE shows this site on the south central coast of the landform (USACE 2012), this location proved incorrect. A deposit matching the precise description of KOD-478 lies on tip of the peninsula (Figures 7 and 8; Appendix 4). This matches AHRS locational information for the site provided by Fitzhugh. Moreover, no similar deposit, which could be confused with KOD-478, is present elsewhere on the peninsula.

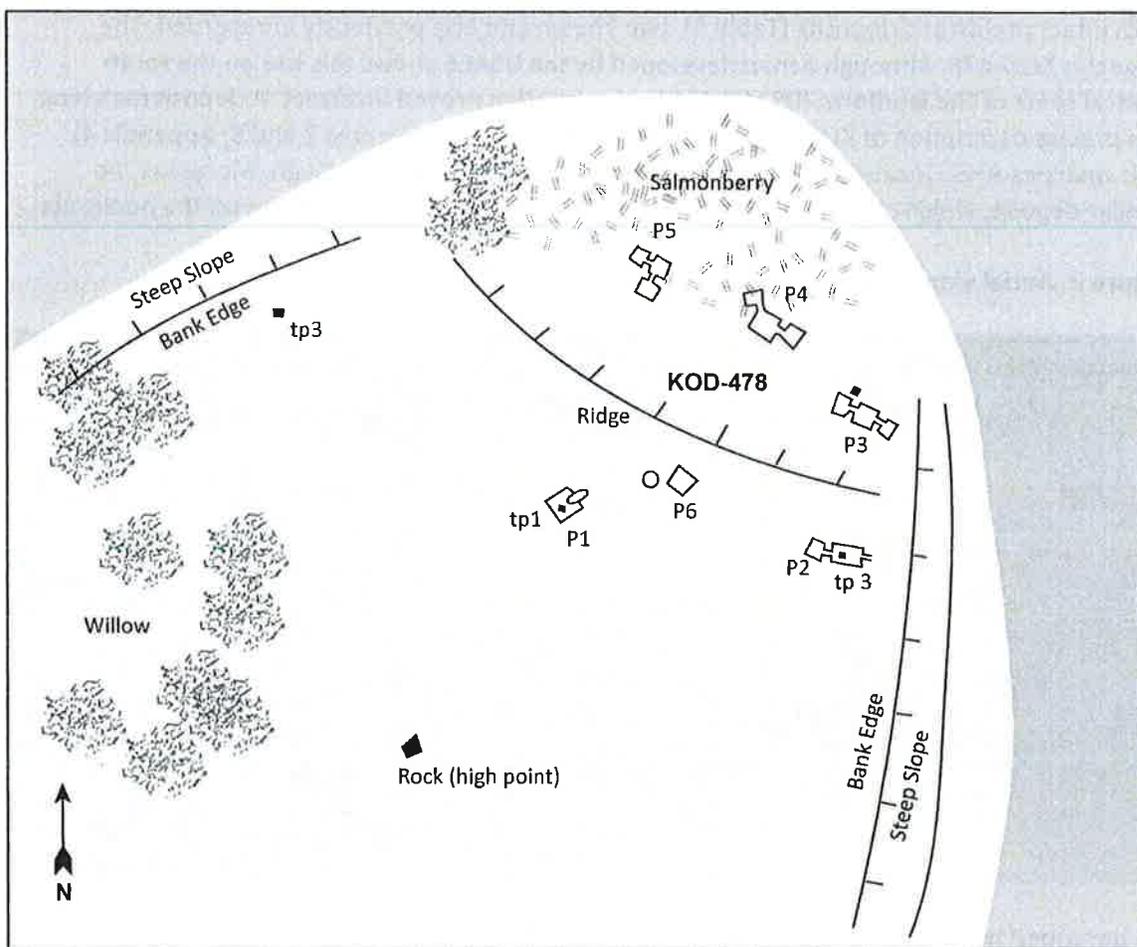
Figure 7. Aerial view KOD-478



As described by Fitzhugh, KOD-478 contains four multi-roomed Koniag structure depressions – likely representing houses (Figure 8). There are also two smaller, single roomed depressions likely representing outbuildings. The multi-roomed structures form a line that follows the gently

curved contour of the peninsula's tip. Three of these structures have two side rooms (P3, P4, and P5), a third has a single side room and a clear entrance area (P2). An intense cover of characteristic site vegetation covers the area of the settlement with the multi-roomed structures, particularly those at the peninsula's northeastern tip. This vegetation includes a conspicuous stand of salmonberries. In contrast, the single roomed structures lay behind the multi-roomed structures, near the center of the site and are less densely vegetated. This site covers an area of roughly 1800 m² and examination of bear digs confirmed Fitzhugh find that there are preserved faunal remains. Museum archaeologists observed shell, exposed by animal turbation, directly adjacent to a multi-room structure. The site is well preserved, with the potential to shed substantial light on the Koniag tradition settlement of Sitkalidak Strait, although digging bear have inflicted some damage – particularly to P4 (Figure 8).

Figure 8. Sketch map of KOD-478 (to scale)

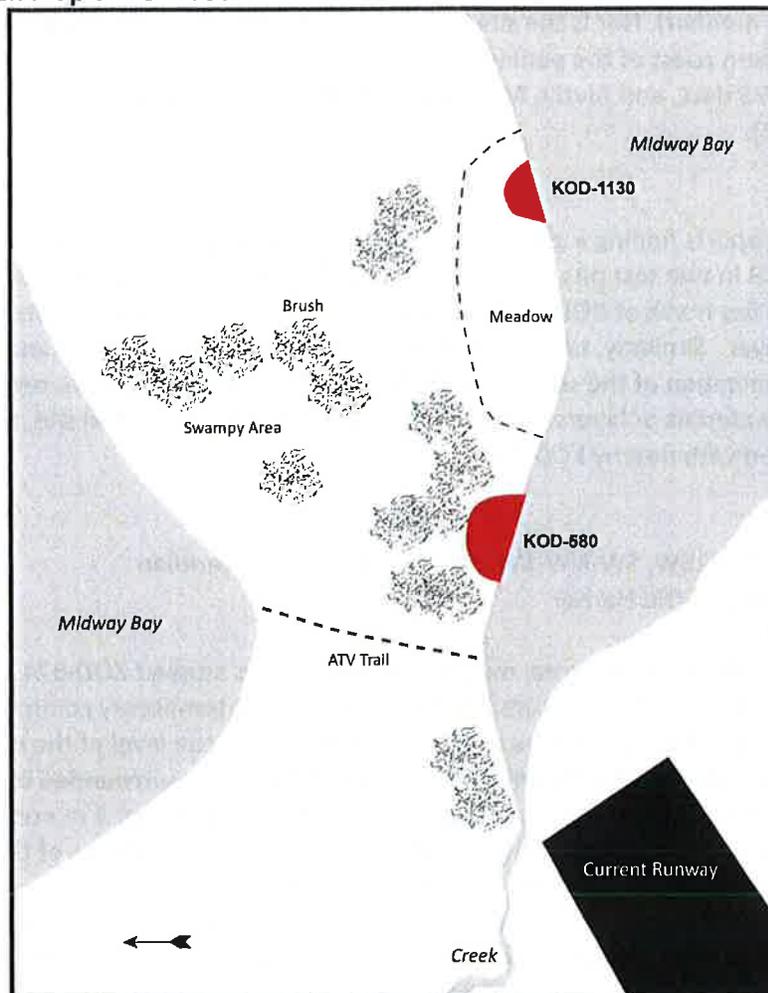


KOD-580

USGS Kodiak A4, T34S, R25W, SW-SE-SE, Section 16, Seward Meridian
 Land owned by the Old Harbor Native Corporation

To the south of KOD-478, on the southern coast of the neck of peninsula (Figure 9), museum archaeologists relocated KOD-580 in a test pit (TP12; Table 2). Unlike KOD-478, this site is not evident from the ground surface. However, a shovel test (TP12) revealed an 8 cm thick layer of gravel and charcoal deeply buried within the lower soil profile. The location and character of these finds are consistent with Fitzhugh's earlier report of the deposit. The gravel layer is clearly cultural and likely represents a living surface, possibly the floor of a feature (e.g., a food processing pit). The field crew took 4 samples from this layer – three carbon samples and a sediment sample (Table 3). Three pieces of worked slate were recovered from a soil horizon known to be ca. 4,000 years old in a second test pit in the area (TP18, Tables 2 and 3). Together the gravel living surface, the slate debitage, and the stratigraphic position of the materials suggest an Ocean Bay II or Early Kachemak phase occupation. Based on local topography, surrounding sterile test pits, and the limits of modern vegetation and patterned ground, the archaeologists estimate this to be a small site, covering about 300m².

Figure 9. Sketch map of KOD-580 and KOD-1130



KOD-1130

USGS Kodiak A4, T34S, R25W, SW-SE-SE, Section 16, Seward Meridian
Land owned by the Old Harbor Native Corporation

On the southern coast of the peninsula that juts into Midway Bay at the eastern end of the current Old Harbor runway, between sites KOD-478 and KOD-580, Alutiiq Museum archaeologists discovered additional Ocean Bay deposits in a previously unrecorded site. In a test pit (TP13, see Figure 6), the archaeologists uncovered a red ochre surface with flecks of wood charcoal, overlain by culturally mixed deposits of local soils. From this surface they collected a single charcoal sample (Table 3). No artifacts were found. These deposits occurred at the base of the soil profile. The presence of red ochre and the stratigraphic position of the materials strongly suggest an Ocean Bay 1 deposit. The site appears small covering about 217 m², based on topography, and the distribution of patterned ground, vegetation, and negative shovel tests. From this site the crew collected 1 sample, but no artifacts were recovered.

Importantly, this new site is not the Ocean Bay II phase site identified by Mike Yarborough in 1984 (with no AHRs number). Nor is the site KOD 580 - an USACE engineers map shows that site on the central southern coast of the peninsula. This is inaccurately located. According to Fitzhugh (2003), AHRs data, and Alutiiq Museum tests, the site rests closer to the neck of the peninsula (Figure 12).

Unnumbered Site

Yarborough (1984) reports finding a ground slate lance (suggesting an Ocean Bay II affiliation), as well a piece of FCR in two test pits at the high point of the topography at the neck of the peninsula. This area lies north of KOD-580. However, neither of Yarborough's tests revealed a definitive cultural layer. Similarly, testing around this location in 2012 (TPs 6, 9 and 11; see Figure 6) and reexamination of the soil profile in Yarborough's old test failed to reveal any additional cultural materials or layers. It is likely that this is a very ephemeral site, perhaps even a find spot associated with nearby KOD-580.

KOD-574

USGS Kodiak A4, T34S, R25W, SW-NW-SW, Section 21, Seward Meridian
Land owned by the City of Old Harbor

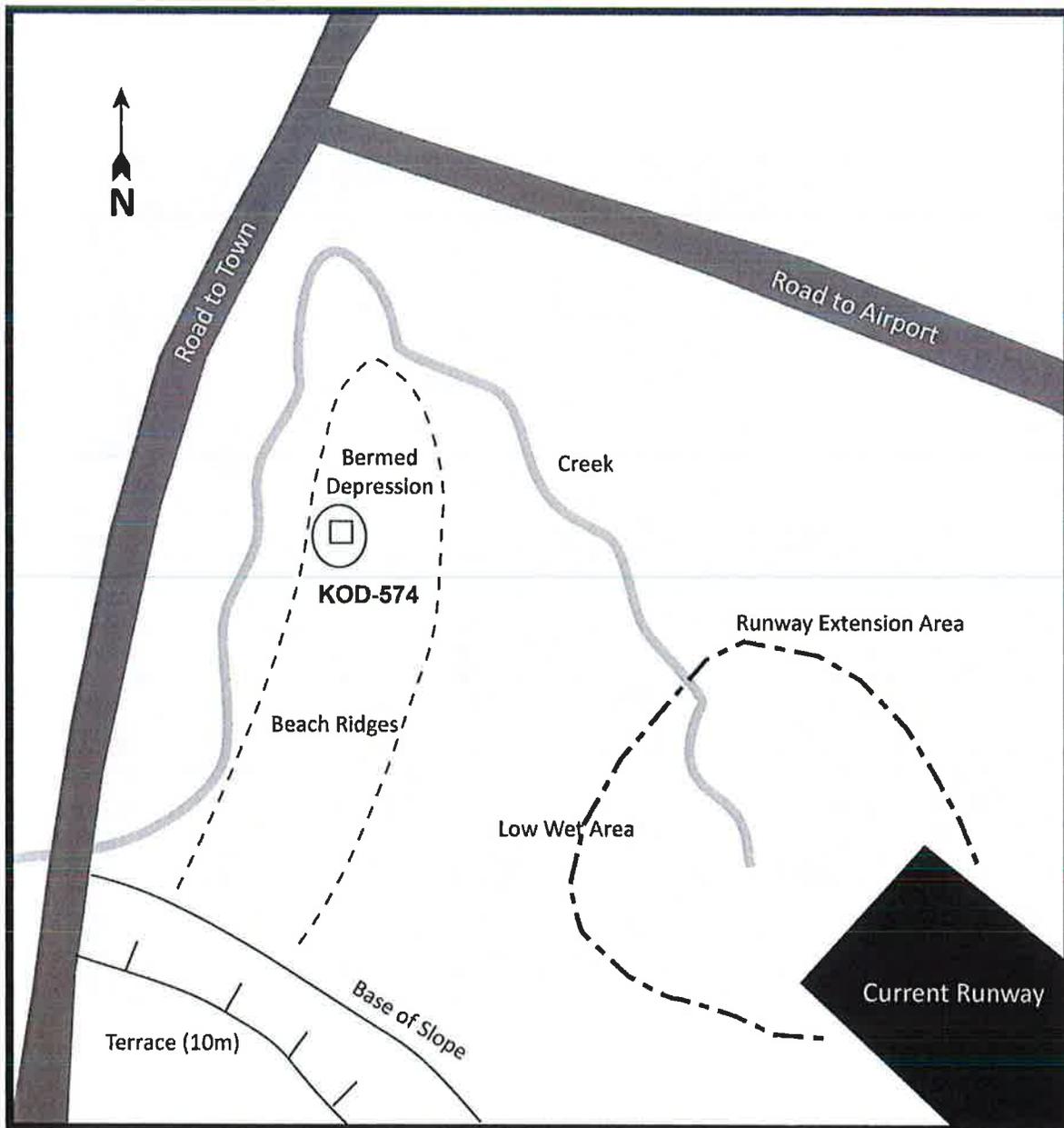
At the southern end of the project area, museum archaeologists studied KOD-574. This site has a single structure depression. This feature lies 36 m east of a contemporary community road, on a former beach ridge that rests above a small creek but below the level of the road (Figure 9). The depression is roughly round with a diameter of about 3 m². It is surrounded by a deep, heavy berm that adds to its size. The feature's outside dimensions are ca. 8 m north/south by 7 m east / west (Figures 9 and 10). The feature is clearly visible on aerial photos of the project area, illustrating its distinctive construction. Although the exact age of the depression is not known, it is similar to prehistoric structures found in Kachemak phase sites elsewhere in the archipelago, dating to about 2,000 BP. The site is about 345 m from the end of the current runway, separated from the feature by a low swampy area. It was tested by Yarborough, who

found a hammerstone inside the wall of the structure. Museum archaeologists did not test it further. Examination of minor animal disturbances in the surrounding area did not reveal site deposits – just beach gravel directly below the sod. The site seems to consist of the house depression alone.

Figure 9. Aerial view of KOD-574



Figure 10. Sketch map of KOD-574



DISCUSSION

The Old Harbor Airport project area contains extensive evidence of prehistoric occupation, perhaps spanning Kodiak's prehistoric era. KOD-478 on the tip of the peninsula dates to the late prehistoric Koniag tradition, while the house pit above the bight (KOD-574) may be affiliated

with the Kachemak tradition. The other two sites on the southern coast of the peninsula date to the older Ocean Bay tradition (KOD-580, KOD-1130), with one from the early part of this cultural horizon and one from the later part. Importantly, all of these sites contain intact cultural strata. They hold layers of cultural debris in primary context. Moreover, three of the sites have intact three-dimensional features (Table 4).

Table 4. Site Impacts

Site	Location	Contents	Likely Impact	NRHP
KOD-478	Tip of peninsula	Koniag houses & midden	Sizeable portion removed	Eligible
KOD-580	South central coast of peninsula	Intact Ocean Bay II strata & likely feature	Removed entirely	Eligible
	High point above neck of peninsula	Ocean Bay find spot	Removed entirely	Not Eligible
KOD-1130	Southern neck of peninsula	Intact Ocean Bay I strata	Buried in gravel or possibly avoided	Eligible
KOD-574	Terrace in southwest project area	Structure depression, Kachemak?	None as presently planned	Eligible

Based on these finds, the museum believes that all four located sites are eligible for inclusion in the National Register of Historic places under criterion D – the ability to provide valuable information on prehistory. Each contains a well-preserved cultural horizon with the potential to shed light on the cultural history of Kodiak’s Native people. Additionally, KOD-478 and KOD-574 have surface features. The presence of structures illustrates the potential for researchers to gain architectural information from these sites as well as data on the activities that took place in different areas of the sites (inside vs. outside). A feature is also likely present at KOD-580 where a distinctive living surface was encountered. In Ocean Bay sites elsewhere in the Kodiak region, such surfaces occur inside features used to process fish for preservation. To date, such features have only been studied in the Chiniak Bay region of Kodiak (Steffian et al. 2006).

Although three of the four sites are small, recent research in the Kodiak region demonstrates that small sites are information rich. These sites often represent focused uses of the landscape and provide scientists with a snapshot of individual activities. For example, recent excavations of the Amak site, a small deposit in Womens Bay revealed an Ocean Bay tradition seal hunting camp. The location of the site was unexpected and its contents different from any previously studied sites. Moreover, small sites are just beginning to be studied around Kodiak. Most archaeological projects have focused on large, centrally located settlements, rather than smaller, peripheral settlements like those documented by the Old Harbor survey. Smaller site studies provide important complimentary information on land use, resource extraction, economic organization, and social structure. They help to provide a fuller picture of past lifeways and data with which to compare the activities that took place in larger settlements.

The unrelocated site – Yarborough’s unnumbered site – appears extremely ephemeral and not eligible for National Register nomination. Concerted efforts to locate a deposit in the area

indicated by Yarborough were unsuccessful and suggest that a substantial site is not present. No additional artifacts or intact strata were located. Together, Yarborough's data and the results of the Museum's survey indicate that there was repeated use of the peninsula by people during the Ocean Bay tradition, and that the locus of this activity was along the southwestern coast of the feature. However, Yarborough's unnumbered site does not appear to be a significant representative of this activity.

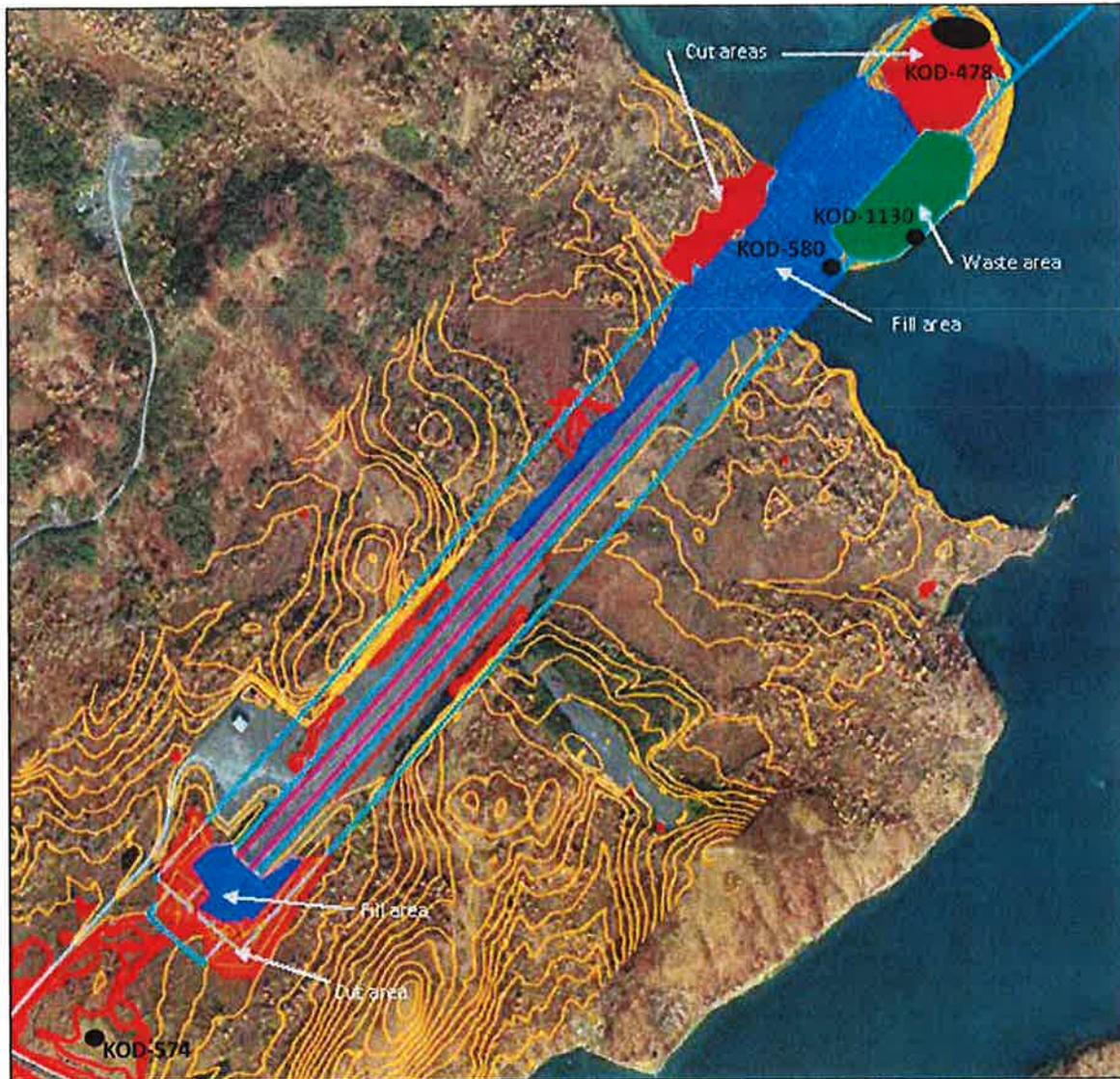
Review of project plans suggests that all of the sites on the peninsula will be impacted by construction Alternative 1 (Table 4; Figure 12). Leveling of the area will remove a substantial portion of KOD-478. Structure depressions P1, P2, and P6 will be removed and as P3 lies at the boundary of proposed ground disturbing work, it is likely to be a least partially removed. Moreover, heavy machinery work in the area has the potential to impact P4 and P5 as they lie very close to the limit of proposed construction. Shearwater Systems representatives confirmed these impressions in discussions with museum archaeologists during the field survey.

KOD-580 and KOD-1130 will also be impacted. At KOD-580, deposits will be removed down to bedrock, destroying the site entirely. In contrast, as presently planned, construction will cover KOD-1130 with a heavy layer of gravel fill, essentially prohibiting any future study. Shearwater representatives noted that avoidance of the site may be possible, although this is not currently planned. As such, it is our opinion that the construction, as presently envisioned, will impact all three of the National Register eligible sites on the peninsula. To move forward with project Alternative 1, we recommend a mitigation plan be developed to insure that these effects are not adverse. This could include excavating samples from the sites to recover representative documentation, avoiding KOD-1130, selecting a construction alternative, or some combination of these options.

In contrast the site at the southern end of the runway (KOD-574) appears to be within the project area but beyond the immediate reach of ground disturbing activity. If project plans do not change – that is as long as OHNC and Shearwater Systems continue to pursue Alternative 1, simply avoiding this site will insure its preservation. For this alternative, we recommend simply flagging the area so that it can be avoided by all construction activities – e.g., parking machinery in this locale. However, it should be noted that selection of construction Alternative 2 would result in an impact to KOD-574. Under this alternative, KOD-574 falls directly in the path of the proposed runway.

Finally, we recommend that dirt moving activities on the peninsula and along its adjacent shore involve monitoring by an archaeologist to insure that any unidentified sites are protected. Although museum researchers tested the areas where sites are most likely to occur, the project lies in a region with a demonstrated high density of prehistoric deposits, particularly old, buried deposits not easily identified from the modern ground surface. It is possible that removal of the soils on the peninsula and immediately adjacent areas will reveal additional cultural deposits not discovered during testing. Monitoring would insure that any such deposits could be identified and assessed. The USACE (2012) makes a similar recommendation in its scope of work for the project.

Figure 12. Site locations relative to construction plans



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APPENDICIES

Appendix 1. Land ownership map



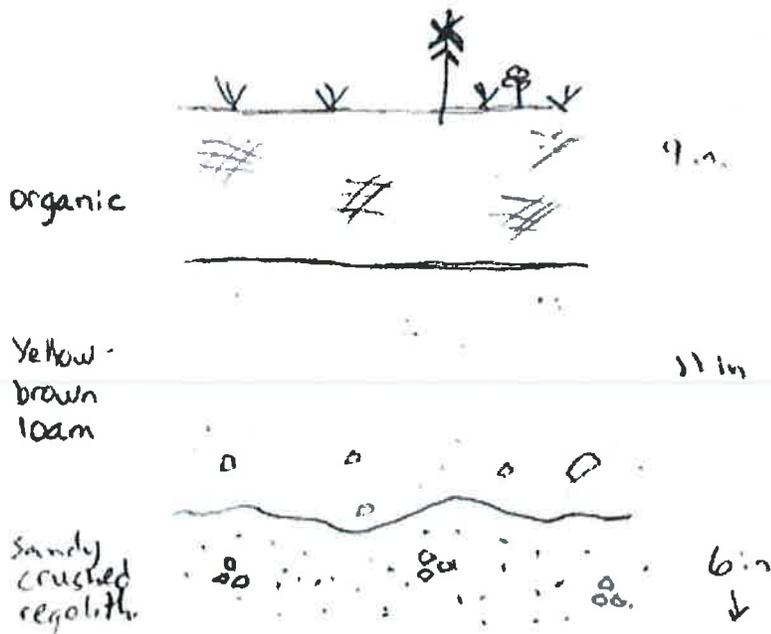
Appendix 3. USACE archaeologists Aron Wilson's field notes

AKW

- 2 -

13 SEP 11

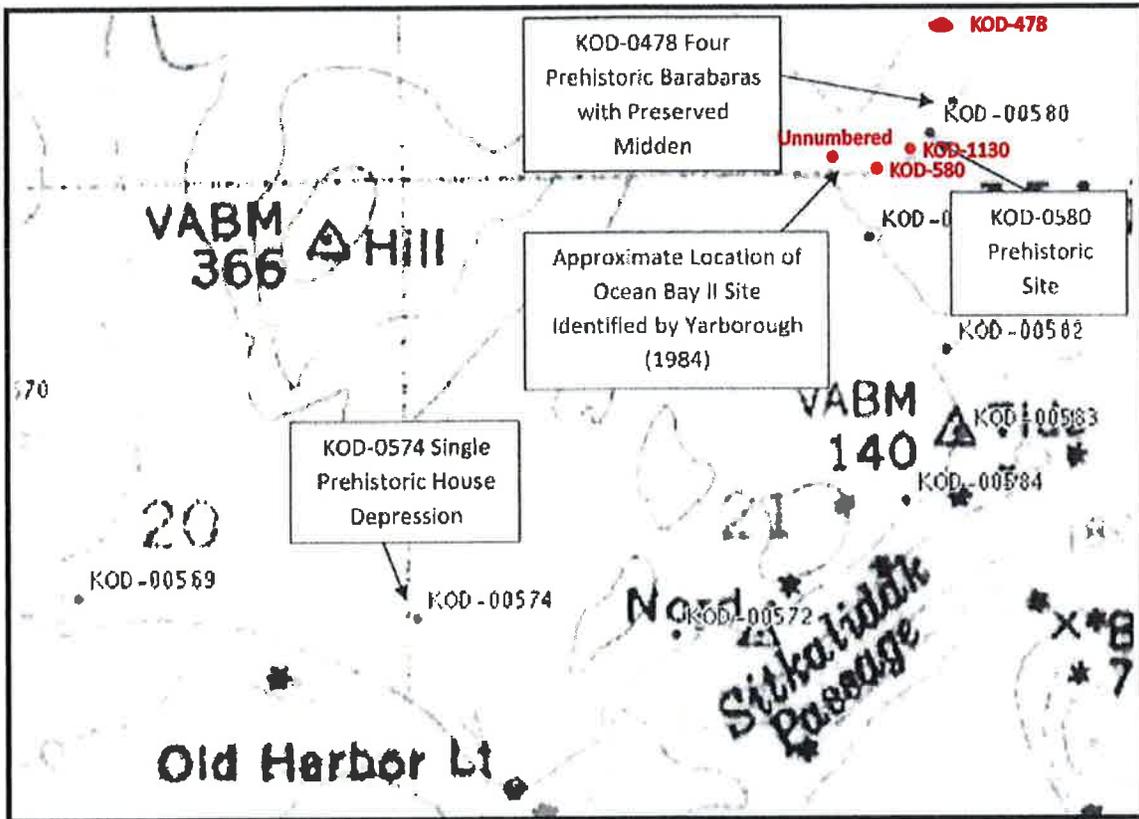
Test Pit 2 (16m dia)



- wet soil to bottom of hole
- largest rocks 5 in long dimension
- larger rocky matrix deeper into regolith
- no significant difference from other test pits on peninsula



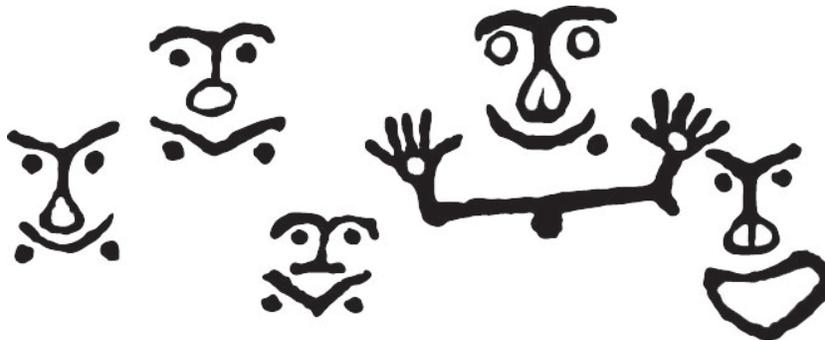
Appendix 4. USACE site map with corrected locations



DRAFT

**Archeological Sites Studies for the
Old Harbor Airport Expansion Project: A Research Plan**

Prepared for the
Old Harbor Native Corporation
2702 Denali Street, Suite 100
Anchorage, Alaska 99503



by

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September 2012

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INTRODUCTION

The Old Harbor Native Corporation (OHNC), an Alaska Native village corporation, is in the process of expanding and enhancing airport facilities in the community of Old Harbor, Kodiak Island, Alaska. The Old Harbor Airport expansion project will lengthen the current gravel airstrip by 2,000 feet and double its width to support cargo planes. It will also alter surrounding topography to reduce aircraft turbulence (Shearwater Systems LLC, n.d.). As the project involves assistance from the U.S. Department of Defense Innovative Readiness Training (IRT), it is considered a federal undertaking. Consequently, OHNC must complete an environmental assessment. This includes identifying, evaluating, and mitigating any negative impacts to cultural properties in the project area as specified by the National Historic Preservation Act and its implementing regulations (36CFR§800).

The airport project area lies at the northeastern end of the community of Old Harbor. In addition to inland areas immediately adjacent to the current airstrip, it includes a thumb like peninsula that stretches into Midway Bay (Figure 1), called here the Midway Peninsula. The area is low, brush covered, relatively flat, and adjacent to the ocean at its northern and southern ends. It is also known to contain archaeological sites.

In 1985, archaeologist Mike Yarborough surveyed the area before the construction of the present Old Harbor airport (1984). He discovered three prehistoric sites in the vicinity, KOD-478 a Koniag tradition settlement, KOD-574 a house with a single structure depression, and an unnumbered site that produced a slate lance but no cultural strata (Table 1). Archaeologist Ben Fitzhugh surveyed the area again in 1995 as part of his doctoral research (2003). In addition to the known sites, Fitzhugh located an Ocean Bay II deposit, KOD-580, on the southern coast of the Midway Peninsula. As such, at the start of the current airport expansion, there were four known prehistoric archaeological sites in the project area; three on the Midway Peninsula, and a fourth below the southern end of the existing airstrip (Figure 2, Table 1).

Table 1. Archaeological Sites in the Project Area

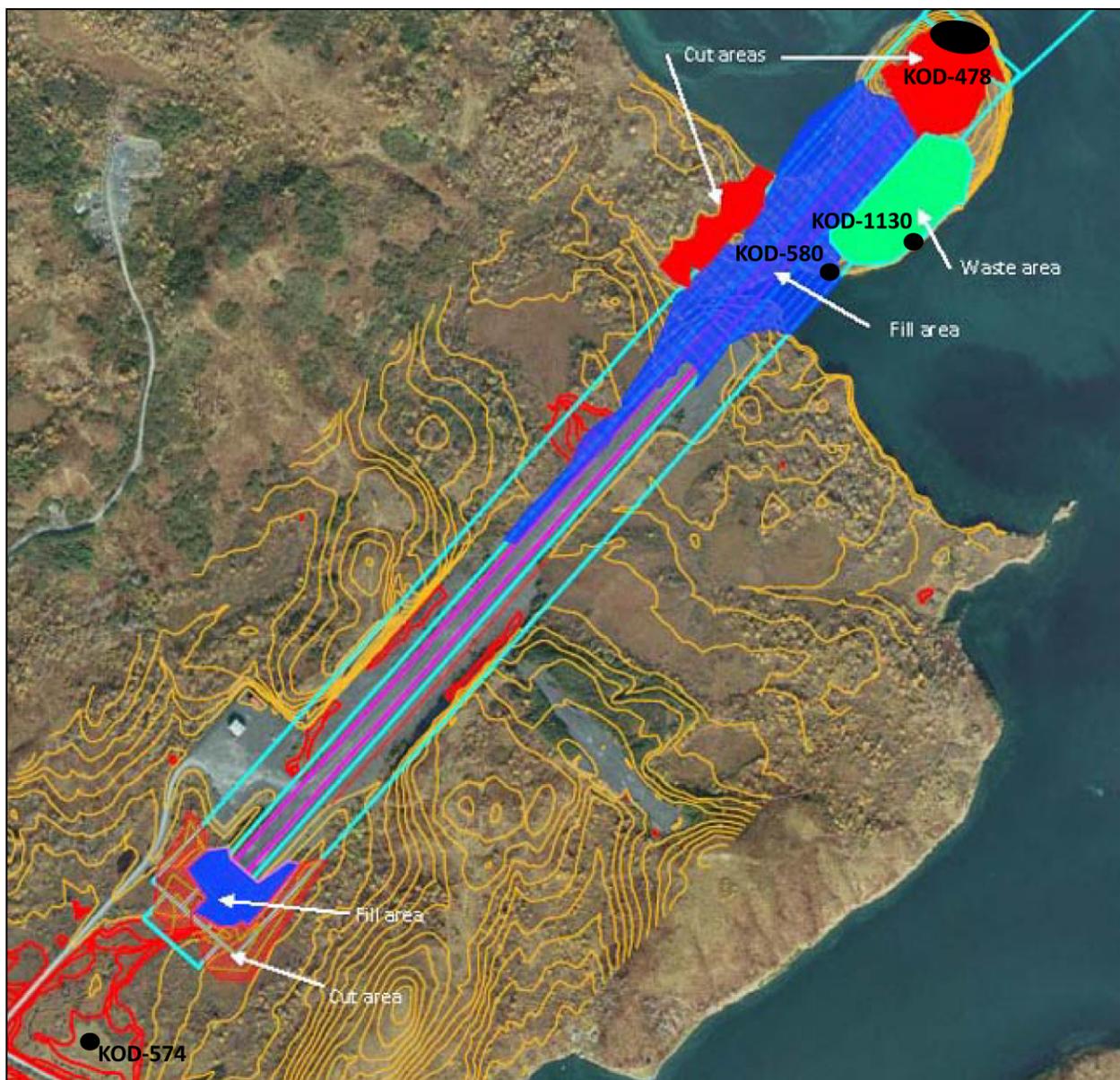
Site	Location	Contents	Likely Impact	NRHP
KOD-478	Tip of peninsula	Koniag houses & midden	Sizeable portion removed	Eligible
KOD-580	South central coast of peninsula	Intact Ocean Bay II strata & likely feature	Removed entirely	Eligible
No Number	High point above neck of peninsula	Ocean Bay find spot	NOT LOCATED Removed entirely	Not Eligible
KOD-1130	Southern neck of peninsula	Intact Ocean Bay I strata	Buried in gravel or possibly avoided	Eligible
KOD-574	Terrace in southwest project area	Structure depression, Kachemak?	None as presently planned	Eligible

Figure 1. Project Area



In June of 2012, Alutiiq Museum archaeologists conducted a three-day archaeological survey in Old Harbor. The project was designed to fill gaps in existing knowledge of the cultural resources in the project area (Bittner 2011). Specifically, OHNC tasked the Alutiiq Museum with evaluating four known prehistoric sites (KOD-478, KOD-580, and KOD-574, and an unnumbered site) for their National Register eligibility. The museum was also asked to survey project areas for undocumented sites. During the survey, the museum studied KOD-478, KOD-580, KOD-574, and located a previously undocumented site, KOD-1130. This Ocean Bay I site lies on the southern coast of the Midway Peninsula near KOD-580 (Figure 2, Table 1). They were not able to locate the unnumbered site, which is likely an isolated find spot. This site is not believed to be eligible for the National Register of Historic Places and is not considered further.

Figure 2. Archaeological site locations relative to construction plans.



Based on the character of the located sites, the Alutiiq Museum found that all four numbered sites were eligible for nomination to the National Register of Historic Places. All of the sites contained intact strata, and three displayed architectural features, with the ability to shed important light on the history of Kodiak's Alutiiq people. The Alaska State Historic Preservation Office agreed with this finding and further determined that KOD-474, KOD-580, and KOD-1130 would be adversely impacted by the proposed airport expansion. Only KOD-574 lies beyond the limits of ground disturbing activity and will not be disturbed.

In accordance with Section 106 of the National Historic Preservation Act, further investigations of KOD-478, KOD-580, and KOD-1130 are now required before airport construction activities on the Midway Peninsula can begin. The area of potential effects for the undertaking is concurrent with the boundaries of the Midway Peninsula on which all three cultural properties are located. This area lies in southeast quarter of Section 16, T34S, R25W of the Seward Meridian, in the USGS Kodiak A4 quadrangle.

This document provides a plan for studying the three sites, outlining research directions and strategies for a six-week excavation project. This plan is designed to mitigate the adverse effects of runway expansion and to help the Old Harbor Native Corporation meet its environmental protection responsibilities.

SUMMARY OF FINDS ON THE MIDWAY PENINSULA

Archaeological survey and testing of the Midway Peninsula revealed the presence of three prehistoric sites. Each is described below to assist in understanding its research potential.

KOD-478

USGS Kodiak A4, T34S, R25W, NW-SE-SE, Section 16, Seward Meridian

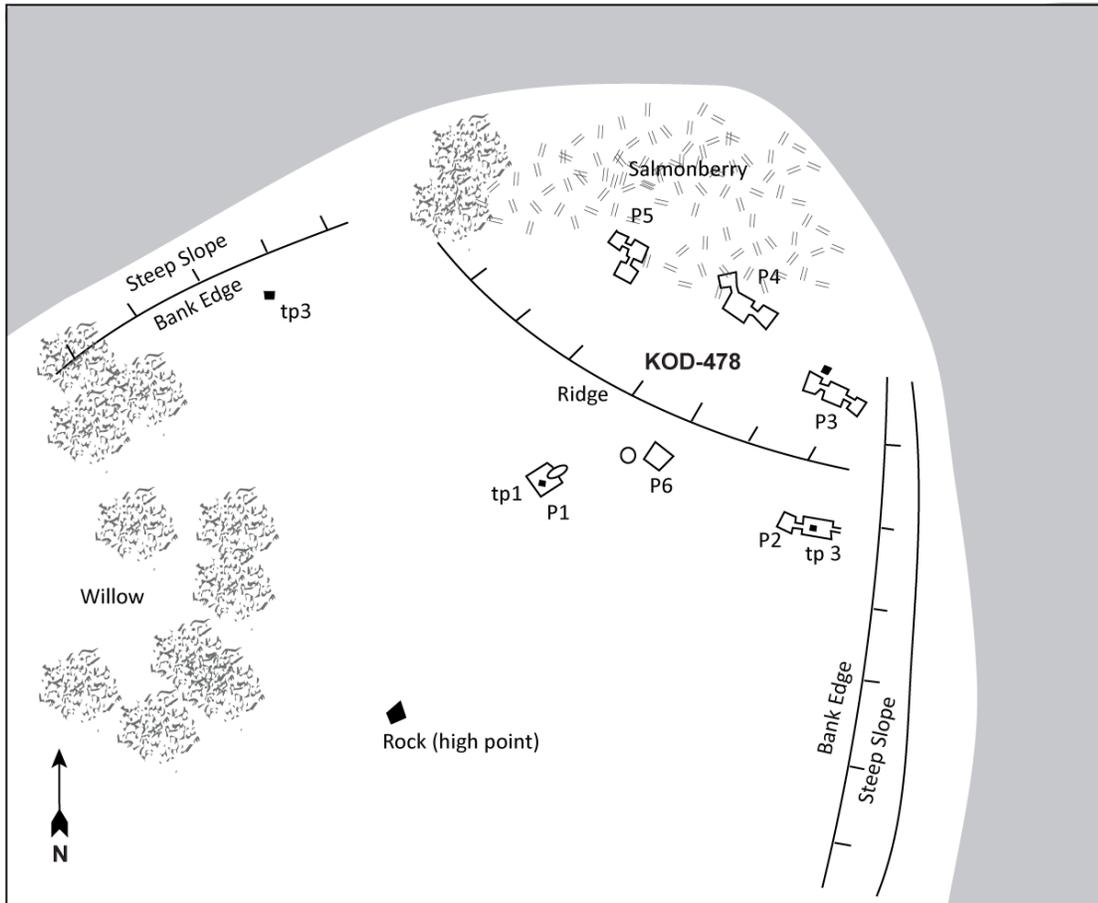
On the Midway peninsula, Alutiiq Museum archaeologists found three sites with intact prehistoric deposits, two known and one previously unrecorded. The largest is KOD-478, which lies at the tip of the peninsula, on both level land and the bank sloping down to the water (Figure 3). As described by Fitzhugh, KOD-478 contains four multi-roomed structure depressions – likely representing houses (Figure 4). There are also two smaller, single roomed depressions likely representing outbuildings. The multi-roomed structures form a line that follows the gently curved contour of the peninsula's tip. Three of these structures have two side rooms (P3, P4, and P5); a third has a single side room and an entrance area (P2).

An intense cover of characteristic site vegetation covers the area of the settlement with the multi-roomed structures, particularly those at the peninsula's northeastern tip. This vegetation includes a conspicuous stand of salmonberries and cow parsnip. In contrast, the single roomed structures lay behind the multi-roomed structures on the more level ground at the tip of the peninsula. These structures, near the center of the site, and are less densely vegetated. This site covers an area of roughly 1800 m² and examination of bear digs confirmed Fitzhugh find

Figure 3. Aerial view KOD-478



Figure 4. Sketch map of KOD-478 (to scale)



that there are preserved faunal remains. Museum archaeologists observed shell, exposed by animal turbation, directly adjacent to a multi-room structure. The site is well preserved, with the potential to shed substantial light on the Koniag tradition settlement of Sitkalidak Strait, although digging bear have inflicted some damage – particularly to P4 (Figure 4).

Based on the presence of multi-roomed structures and the intense vegetation, this site appears to be from the late prehistoric Koniag tradition. A carbon ample from the site is currently being dated to confirm this affiliation. The small number of structures suggests a modest sized settlement, occupied by several families. The location of the settlement, overlooking Midway Bay at the entrance to Sitkalidak Straight suggests that it may have been a place where residents watched for fish or sea mammals moving into the area.

KOD-580

USGS Kodiak A4, T34S, R25W, SW-SE-SE, Section 16, Seward Meridian
Land owned by the Old Harbor Native Corporation

To the south of KOD-478, on the southern coast of the Midway Peninsula, near the neck of the landform (Figures 2 and 5), museum archaeologists relocated KOD-580 in a test pit (TP12). Unlike KOD-478, this site is not evident from the ground surface. However, a shovel test (TP12) revealed an 8 cm thick layer of gravel and charcoal deeply buried within the lower soil profile. The location and character of these finds are consistent with Fitzhugh's earlier report of the deposit. The gravel layer is clearly cultural and likely represents a living surface, possibly the floor of a feature (e.g., a food processing pit). The field crew took 4 samples from this layer – three carbon samples and a sediment sample. One of these carbon samples is currently being dated. Three pieces of worked slate were recovered from a soil horizon known to be ca. 4,000 years old in a second test pit in the area.

Together the gravel living surface, the slate debitage, and the stratigraphic position of the materials suggest an Ocean Bay II or Early Kachemak phase occupation. Based on local topography, surrounding sterile test pits, and the limits of modern vegetation and patterned ground, the archaeologists estimate this to be a small site, covering about 300m².

KOD-1130

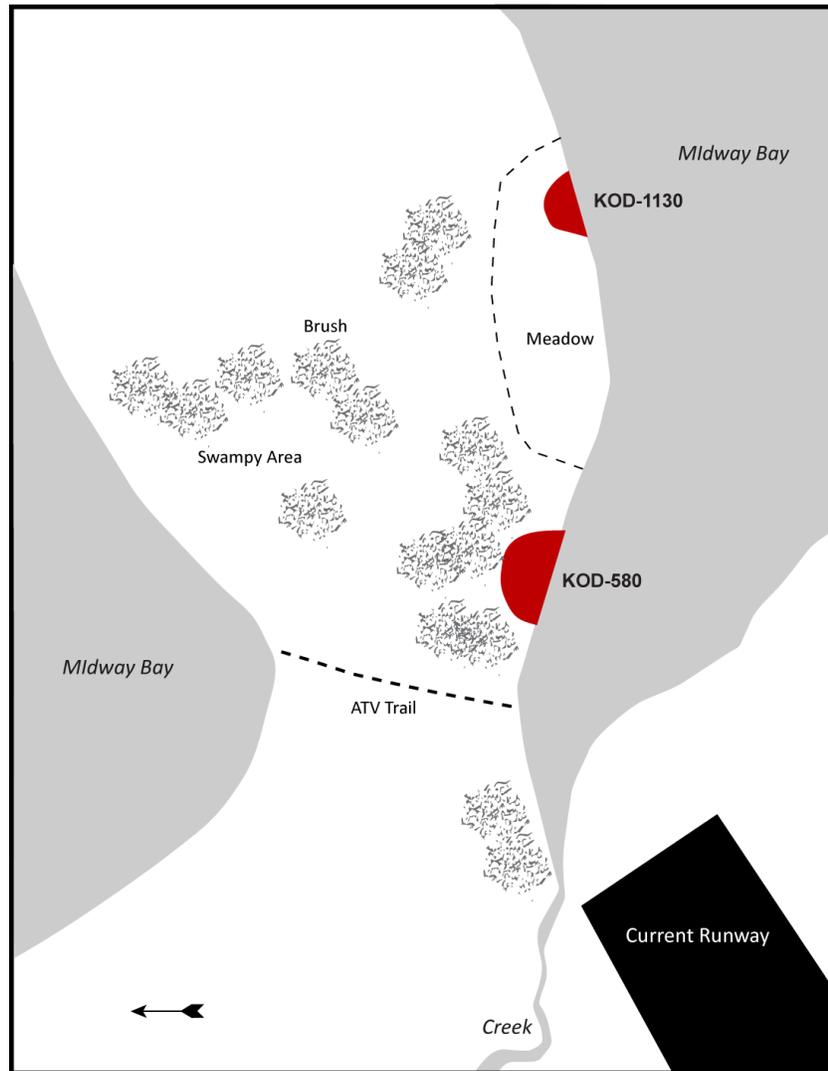
USGS Kodiak A4, T34S, R25W, SW-SE-SE, Section 16, Seward Meridian
Land owned by the Old Harbor Native Corporation

On the southern coast of the peninsula that juts into Midway Bay at the eastern end of the current Old Harbor runway, between sites KOD-478 and KOD-580, Alutiiq Museum archaeologists discovered additional Ocean Bay deposits in a previously unrecorded site (Figure 5, Table 1). In a test pit (TP13), the archaeologists uncovered a red ochre surface with flecks of wood charcoal, overlain by culturally mixed deposits of local soils. From this surface they collected a single charcoal sample. No artifacts were found. These deposits occurred at the base of the soil profile. The presence of red ochre and the stratigraphic position of the

materials strongly suggest an Ocean Bay 1 deposit. The site appears small, covering about 217 m² based on topography, and the distribution of patterned ground, vegetation, and negative shovel tests. From this site the crew collected one carbon sample, but no artifacts were recovered. This sample is currently being radiocarbon dated.

Importantly, this new site is not the Ocean Bay II phase site identified by Mike Yarborough in 1984 (with no AHRS number).

Figure 5. Sketch map of KOD-580 and KOD-1130



CULTURAL HISTORY OF THE KODIAK ARCHIPELAGO

To provide a context for the research directions pursued during excavations of KOD-478, KOD-580, and KOD-1130, this section provides a brief review of the cultural history of the Kodiak Archipelago.

The cultural history of Kodiak is well known with over 80 years of archaeological inquiry contributing to current understanding. Archaeologists now recognize three related, prehistoric cultural traditions, Ocean Bay, Kachemak, and Koniag (Table 2), and believe that the Island’s material record indicates continuity between these traditions. Over time, Kodiak’s foraging societies grew, technologies changed, and people harvested local resources with increasing intensity and efficiency. Ultimately, this process resulted in the development of the populous, socially complex Alutiiq societies recorded at historic contact. A brief review of these prehistoric cultural traditions follows. Readers are referred to the following sources for more detailed information on Kodiak prehistory (Black 2004; Clark 1974, 1979, 1984; Crowell et al. 2001; Fitzhugh 2003; Knecht 1995; Steffian et al. 2006).

Archaeologists believe that people arrived on Kodiak from the west and were fully equipped to harvest food and resources from the sea. These early settlers are assigned to the Ocean Bay tradition, a way of living that spans from about 7,300 to 4,000 years ago. For nearly three millennia people of this tradition hunted and fished from relatively small coastal settlements, trading occasionally with their neighbors.

Table 2. Cultural traditions of the Kodiak Archipelago

Tradition	Phase	Date
Ocean Bay	Ocean Bay I Ocean Bay II	5500 BC to 3000 BC 3000 BC to 2000 BC
Kachemak	Early Kachemak Late Kachemak Transitional Kachemak	2000 BC to 700 BC 700 BC to AD 950 AD 950 to AD 1300
Koniag	Early Koniag Developed Koniag	AD 1300 to AD 1500 AD 1500 to AD 1763
Alutiiq	Russian American	AD 1763 – AD 1867 AD 1867 to the Present

Sites of the Ocean Bay I phase of the tradition (5500 BC – 3000 BC) are distinctive, often containing conspicuous layers of reddened earth from the use of naturally occurring ochre, perhaps to tan hides. Early Ocean Bay sites also contain an abundance of chipped stone tools including microblades, points, and knives. Some are made from non-local materials, obtained from the mainland. However, Kodiak’s locally available red chert was widely used suggesting only limited trade. Houses of this era are not well known, but research by the Alutiiq Museum suggest that Ocean Bay people built structures by stacking blocks of sod to form walls. By about 5,000 years ago, people of the Ocean Bay began to grind slate extensively, fashioning a variety of slender bayonets and broad knives from Kodiak’s hard black slate. This marks the start of the Ocean Bay II phase. Bayonets appear at both fishing and hunting locales, suggesting they were widely used harvesting tools. Housing of this time period include some of the first true semi-subterranean structures, with sod roofs, simple entrances, and small slate slab hearths. People

also built more temporary structures using slate slabs to create a low circular wall possibly covered with hides.

Over time, Kodiak residents developed new harvesting, butchering, and processing technologies and began to fish more intensively. This marks the beginning of the next cultural tradition, known as the Kachemak (2000 BC – AD 1300). During the Kachemak tradition, intensified fishing practices led to increases in food storage and a reduction in mobility. Early Kachemak sites (ca. 2000 BC – 700 BC) are filled with pits containing charcoal and fire cracked rock. They suggest that residents focused on processing food for later use, rather than harvesting for immediate need. This activity created stockpiles of food and reduced movement around the landscape. Evidence of trade is limited, suggesting that people focus on harvesting local resources, rather than exchanging materials with neighbors – both within and beyond the Kodiak region. Single roomed sod structures continued to be a primary form of dwelling, and are very similar in construction to those of the preceding Ocean Bay II phase.

Communities grew over the span of the Kachemak tradition as people moved their settlements less, creating larger, more permanent villages. The first sizeable villages appear on Kodiak about 2,000 years ago. Collections of single-roomed sod house structures, surrounded by small storage buildings, suggest that people lived in nuclear family groups. Many of these houses had entrance tunnels designed to trap warm air in the house, benches for sitting and sleeping, and a selection of clay-lined pits and cooking features surrounding a central hearth. Over the course of the tradition, trade with neighboring areas increased dramatically. Kodiak Islanders obtained coal, antler, ivory, and volcanic stone in great quantities from the mainland, and used these materials to manufacture items on Kodiak. Sites of this time are filled with debitage, preforms and finished items of these non-local materials suggesting ready access to the mainland. Items made from these materials included a variety of jewelry – labrets, beads, pins and pendants, as well as small carvings. The first signs of territoriality and warfare also appear in the Late Kachemak (700 BC – AD 1300), perhaps in response to increased competition for resources among members of a growing population. Fort sites, evidence of butchered human remains, and a filling of the landscape with settlements suggest increasing competition. Similarly, the appearance of petroglyphs, ossuary style burials in village sites, and regional styles of jewelry signal an increasing concern for social space. People of this era appear to have been advertising their affiliation with social groups and places on the landscape to insure access to resources in an increasingly competitive environment.

The final prehistoric era is the Koniag tradition (AD 1300 to AD 1764). This era is characterized by heightened ritual and the development of a ranked society. During the Koniag era, families began working together to harvest, process, and store resources in massive quantities—fish and whales were among the most important. Leaders emerged to manage labor and stores, and held elaborate winter festivals to demonstrate their wealth and power.

Archaeologically, these changes appear in the size and configuration of settlements. Large settlements, with more houses, and a greater variety of structures appear in the archaeological record. Alutiiq people began building multi-roomed dwellings capable of housing extended

families and quantities of stores. Items once processed and stored in sheds are now processed and stored inside large houses. Moreover, large permanent villages appear in new settings – particularly the inland banks of Kodiak’s major salmon rivers. For the first time Alutiiqs appear to have spent a significant portion of the year living away from the coast. Similarly, there are changes in technology. Alutiiq people began building stone weirs and developed a new form of harpoon to spear salmon trapped behind these structures. Pottery vessels for cooking and storing foods appear, and larger woodworking tools for building larger houses. A hallmark of this tradition is the presence of community dwellings, large buildings used as central meeting places, and a setting for winter festivals. One exceptionally preserved Koniag tradition site, held examples of the ceremonial gear used in winter festivals. Rattles, drums, masks, and feast bowls were among the finds. Accompanying ceremonial gear are items of personal adornment that suggest a heightened concern for displays of wealth and status.

Each of these prehistoric cultural traditions is well represented in the archaeological record of eastern Kodiak Island, known from both survey and excavation data from a variety of sites found in coastal settings – including nearby Sitkalidak Island, Three Saints Bay, and the coast of Sitkalidak Strait surrounding Old Harbor.

In the late 1700s Russian fur traders arrived in the Kodiak Archipelago. Western settlers brought disease and trade goods to Native people, and create a new social and economic system. Many Alutiiqs died. Others were enslaved. Native culture changed dramatically during this era with the introduction of western goods, the Russian language, and the Orthodox faith. Some traditions disappeared rapidly, like the practice of wearing labrets. Others faded or were hidden from view. The lavish winter festivals of ancient times are one example. Russian era archaeological sites appear throughout the Kodiak region and include artels (work stations), seasonal harvesting camps, a brick kiln, and other Russian facilities.

In 1867 the United States purchased Alaska and additional cultural changes took place. The commercial fishing industry grew in the final decades of the nineteenth century leading to changes in the local economy and realignment of the Alutiiq population in relation to opportunities for wage labor. Canneries, wood-framed houses, and western goods are among the material correlates of this major cultural change. Other historic enterprises included fox farming, boat building, trapping, and mining.

RESEARCH DIRECTIONS

The three prehistoric sites on the Midway Peninsula contain substantial, intact strata and three-dimensional features useful for addressing questions on the cultural history of the Kodiak Archipelago.

Archaeologists studying Kodiak prehistory have typically focused on large deposits, studying sites with extensive horizontal deposits and numerous surface features. Kodiak’s impressive archaeological record, with hundred of well-preserved prehistoric sites, includes many large, centrally located settlements that provide a broad sample of materials reflecting past lifeways.

This is true in all prehistoric eras. Until recently studies of Ocean Bay, Kachemak, and Koniag lifeways have focused on sizeable settlements, often interpreted as winter villages. The Rice Ridge Site (ca. 7,000 – 4,000 years old), Zaimka Mound (ca. 4,000 – 3,000 years old) Crag Point, the Uyak Site, and Old Karluk (ca. 2,700 – 1,000 years old), Settlement Point and Karluk One (ca. 800 – 200 years old) are all well studied sites where people gathered repeatedly and for long periods of time, built substantial communities, and left large accumulations of debris.

While large sites offer a wealth of details on past lifeways, they can be difficult to decode. The repeated, long-term use of a settlement creates a palimpsest of deposits, where older and younger materials can be mixed and hard to fully separate. As succeeding generations of residents dug into older deposits to build their homes, they disturbed and mixed the underlying deposits of ancestors.

Large settlements also only offer a part of the picture of life on Kodiak. Alutiiq people foraged throughout the island's environments using a series of small camps, processing areas, caches, quarries, trails, etc. These sites document subsistence activities, patterns of landscape use, and changes in economic strategies over time. These smaller settlements often represent a focused use of the landscape and provide scientists with a snapshot of individual activities. For example, recent excavations of the Amak site, a small deposit in Womens Bay on northern Kodiak Island, revealed an Ocean Bay tradition seal hunting camp. The location of the site was unexpected and its contents different from any previously studied site. The site provided a picture of hunting activity 5,600 years ago, and evidence of food processing not well documented before.

The three closely spaced, yet temporally separated sites, on the Midway Peninsula offer the chance to study landscape use and its evolution in one area. Here, small deposits dating to the Ocean Bay I, the Ocean Bay II and / or Early Kachemak, and the Koniag, lie on one landform in a shared environment. The residents of the Midway Peninsula, though separated in time, experienced a broadly similar environment and set of locally available resources.

We do not know what types of settlements these sites represent. Small sites are not well represented in the excavated sample of ancient Alutiiq sites. Based on the location of the sites near a productive salmon stream and overlooking protected marine waterways, we hypothesize that they were fall camps. We expect that people settled here to process salmon captured in nearby streams or to watch for sea mammals pursuing the seasonal abundance of fish. As such, a central question in all three site excavations will be their season of occupation and function. What sorts of activities are represented at these small settlements and what portion of the annual economic cycle do they reflect? If they are camps, we would expect relatively more expedient building techniques, features and artifacts reflecting a focused set of activities, and faunal remains indicative of the season of occupation.

As harvesting of fish and game often creates a surplus of food and raw material that must be processed and preserved, storage is another issue that could be addressed by the three sites. Across the span of Alutiiq history, foragers processed greater quantities of food with increasing efficiency. Researchers once thought that storage was limited to the later millennia of Alutiiq

history, but growing archaeological evidence suggests that even Ocean Bay tradition foragers preserved a portion of their catch for later use. The presence of a potential harvesting feature at KOD-580 and the presence of small external sheds at KOD-478 hints that processing and storage activities took place at these sites. What was being processed and how? How did food processing and storage change over the span Alutiiq history? The sites on the Midway Peninsula may provide valuable details. If such information is present, data recovered from the three sites could provide a valuable comparison to similarly aged small sites studied in the Women's Bay region of Kodiak, where the character of extractive camps in the Ocean Bay and Early Kachemak phases is starting to come to light.

In sum, the research directions suggested here more historical than evolutionary. With little information available on small settlements, and three small sites to study, the project offers the opportunity to fill a gap in the record of site types and functions, and possibly to compliment small site studies underway in an adjacent region of the Kodiak Archipelago.

DATA RECOVERY OBJECTIVES

General Considerations

Data recovery at KOD-478, KOD-580, and KOD-1130, will be aimed at understanding the functions of Midway Peninsula's small sites through broad horizontal excavation. As each site appears to represent a single discrete occupation, a horizontal approach will allow investigators to better understand the activities that took place at each site. This will create distinct views of Alutiiq economic and social organization at three different points in time - ca. AD 500, 4,000 BC, and 6500 BC – in one location.

Mitigation efforts will focus on studying areas of the sites most likely to be destroyed by construction. This includes the central areas of the two older deposits (KOD-580 and KOD-1130), which will be totally removed. It also includes the inland and northwestern portion of KOD-478, which is the most likely area to be removed.

The specific data recovery objectives are:

GOAL 1. Collect information on site activities

1A. Sample the variety of preserved features: Understanding the three-dimensional features preserved at KOD-478 and KOD-580 is essential to interpreting the site's functions. At KOD-478 block excavations will be extended beyond the boundaries of structure depressions visible on the site surface to include areas outside of houses (e.g., middens) and smaller external features (e.g., sheds [P1] and a pit). This will provide information on the construction, contents, and function of both houses and external features, expanding information on the activities represented in the Koniag tradition. At KOD-580, excavation will center on a processing feature located through testing, and include areas outside the feature. By cleaning the eroding site profile archaeologists will locate the remains of the structure and orient excavations around both internal and external areas.

1B. Sample artifacts from a variety of spaces: At all sites, block excavations will provide archaeologists with sample of artifacts from a broad horizontal space to capture the range of activities represented. At KOD-1130, excavation will be centered on the test pit in which the site was located to reveal intact strata below and any potential features or activity areas. At KOD-478 and KOD-580, where architectural features exist, block excavations will capture the different types of spaces present at the e.g., site, indoor, outdoor, special purpose. Careful screening of cultural deposits and mapping of artifacts in relationships to features will support this goal at all three sites.

GOAL 2. Collect information on architecture

2A. Expose and document the variety of features: Through broad horizontal excavation, researchers will expose site strata and the features they contain. At KOD-580 this will include the likely food processing structure. At KOD-478, this will include examples of the major types of features visible on the site surface – one multi-roomed house, one single room structure, and one pit - to reveal methods of house construction, document internal features, and examine the use of interior spaces.

2B. Determine the Contemporaneity of Features at KOD-478: To understand the function and use of KOD-478, archaeologists need to determine if the site's structures were occupied at the same time. It is possible that the houses were built at different times, perhaps several centuries apart. To address this issue, archaeologists will test all of the structures on the site to recover wood charcoal for radiocarbon dating, to record information on construction, and to sample artifacts. This will assist researchers in better understand the composition of the community and its function.

GOAL 3. Collect information on site seasonality

This project will include work with a faunal analyst to sample the animal remains preserved at KOD-478, and perhaps KOD-580. Like artifact sampling, this will include recovering animal remains from the variety of spaces represented at the sites (on house floors, in features, and from middens) where preserved. It will also include laboratory studies aimed not only at quantifying the remains and the animals they represent, but assessing their likely season of harvest.

EXCAVATION METHODS

The excavation of KOD-478, KOD-580 and KOD-1130 are tentatively scheduled for six weeks beginning in late May 2013. A crew of six experienced archaeologists and field technicians will carry out the work under the direction of Patrick Saltonstall, MA, a professional archaeologist who meets the Secretary of the Interior's standards for an archaeologist. Work will begin at the two small sites on the southern coast of the peninsula. These closely adjacent sites will be simultaneously excavated over the course of two weeks. During these first two weeks, community members will be welcomed to visit the excavation and watch its progress.

In week three of the project, the crew will move to KOD-478 and invite community volunteers to help with the excavation. If the Old Harbor Native Corporation wishes to establish a paid internship program for residents, the museum will work with the corporation to design such an opportunity. During a month of excavations at KOD-478, the crew will excavate a variety of the site's features as well as areas between features to understand the activities that occurred in the settlement – its age, contents, and functions.

Block excavation: At all sites, the first course of action will be to establish a metric grid. This will be accomplished through the use of a transit, stadia rod, and metric tapes. All excavation activities and proveniences will be tied horizontally and vertically to a site datum and the site grid using metric measurements. At each site, a grid will not be laid out over the entire deposit. Instead, crews will establish subdatums tied to the grid for each excavation area.

Museum archaeologists will conduct block excavations at all three sites. At the two older sites (KOD-580 and KOD-1130), these excavations will be centered over the known locations of cultural strata. At KOD-580 excavators will clean the sites erosion face before establishing an excavation block to identify the location of the site's buried feature. This information will then guide the placement of the block excavation to target this architectural feature. At KOD-1130, the excavation block will be centered on the test pit in which the site was first located.

At KOD-478, block excavations will be oriented to sample features visible on the site surface as well as the intervening outdoor area. The crew will excavate one multi-roomed structure (P5), one single roomed structure (P1), and an area of the site midden. The goal of these excavations will be to locate structure floors, examine structure architecture, reveal the nature of stratigraphy both inside and outside of structures, and collect representative samples of artifacts and faunal materials from different site areas.

All excavation will follow natural/cultural stratigraphy whenever possible. If this is not possible, 5 cm or 10 cm levels will be used. Block excavations will be open rather than retaining baulks.

The museum plans to excavate roughly 114m² as follows:

KOD-1130 – 16 m² area, centered on the positive test pit and suspected site area.

KOD-580 – inside 20 m² area, centered on the gravel filled feature.

KOD-478 – Block excavations centered on P1 (25 m²), P5 (36 m²), as well as at least 9 m² in a midden area beside P5, and a total of 8m² in tests in adjacent structures and features (see testing below).

As finds and time dictate, these excavations may be expanded to capture additional site area or buried features.

Artifacts will be collected by square and level in all strata, except where they occur in association with floors or features. On house floors and in features, all artifacts will be piece plotted and assigned a unique field number. When features are present in unit floors or walls,

plan and profile drawings will be made, and video and photographs taken. When occupation floors are encountered, dateable material will be collected. Features will be given feature designations, drawn, photographed, videotaped, and described. Attempts will be made to excavate each individual features as a unit.

The soil removed from cultural strata will be excavated by hand and screened through either ¼" or ½" mesh. The ½" mesh will be used selectively on soils containing very wet or clayey soil, quantities of FCR, or course-grained material (e.g., gravel). Modern sod, volcanic ash deposits, and sterile soils separating cultural strata will be skim shoveled and not screened. Soil sampling will be limited to the size and number of samples necessary to gain dateable material from selected features.

Bulk sampling will target dateable material. Bulk samples of soils will not be systematic. Rather, when soil containing dateable material is identified a sample adequate for laboratory extraction of dateable material will be collected.

Similarly, the museum will collect faunal materials judiciously. Materials found in structures (e.g., on a house floor or in a smoking feature) will be collected in their entirety. However, in midden excavations, the museum will implement a selective sampling strategy designed to recover a representative collection of animal and shellfish remains rather than all of the materials present. For example, bulk samples might be collected from each stratigraphic level in a one meter square, and then all bird and mammal bones collected universally by unit or screen as encountered. The precise sampling strategy will be determined in consultation with a faunal analyst hired for the project and with the goal understanding site function and seasonality.

The sod capping excavation areas, and the soil removed from them, will be stock piled in areas immediately adjacent to the excavations. However, as extensive planned construction will remove or burry all three of the sites studied, no back filling will be completed.

Testing: In addition to the excavations outlined above, museum archaeologists will test each of the structures at KOD-478 not excavated or previously tested. Crew members will excavate 1x2 m² of tests in the center of structures P3, P4, P6, and the small pit adjacent to P6, for an additional 8 m² of excavation. The goals of this work will be to (1) obtain samples of wood charcoal for radiocarbon dating, and (2) to gather information on the buried strata and architectural details (e.g., the presence of a structure roof, the presence of a hearth feature and associated features). The information from these tests will assist in determining the age of the village, the duration of use, and the contemporaneity of structures.

Monitoring: A MOA between OHNC and the U.S. Army Corps of Engineers, calls for monitoring of construction activities (see MOA Section II B). As archaeological sites are not known to occur in inland regions of the project area, and are only associated with the soil profile, not deposits of diamicton below, the museum proposes to monitor the removal of soil on the Midway

Peninsula. This work could be completed both during the field season and immediately following the excavations, as follows.

First, when the excavation of KOD-580 and KOD-1130 are complete, earth-moving activities could begin on the southern half of the Midway Peninsula. To assist this process, the museum could provide one archaeologist to monitor the removal of top soil to insure that previously unidentified sites are not disturbed by construction. Excavations at KOD-478 would be underway during this phase of monitoring.

Second, following the excavation of KOD-478, earth moving at the northern end of the Midway Peninsula could begin. The Alutiiq Museum proposes to provide an archaeologist to monitor this work the week following the excavation, or for as long as deemed necessary by the contractor performing the earthwork.

LABORATORY WORK

Laboratory analysis will begin during the excavation and continue through the fall of 2013. The field crew will make weekly shipments of artifacts and samples from Old Harbor to Kodiak via air taxi. An experienced collections assistant based in Kodiak will clean and dry the materials as they arrive, working in the museum's laboratory. Samples will be dried, rebagged, and cataloged, and select samples processed for radiocarbon dating. Artifacts will be cleaned, individually numbered, and described, and the resulting catalog of collections computerized to assist in collections management and the development of statistical summaries for the project report. The museum's registrar Marnie Leist will provide oversight for the lab work. Curator Patrick Saltonstall will check the identification of all objects to insure accuracy and consistency. We expect to process about 4,000 artifacts and samples.

If organic artifacts are uncovered that require stabilization, Leist will conduct basic stabilization as appropriate. Leist will consult Alaska State Conservator Ellen Carrlee regarding treatment options and log all of her treatment activities. This will create a clear record of the care each object received. We expect that less than 100 objects would require such treatment.

Curator Patrick Saltonstall will manage the care of project records. Following the field season he will digitize all of the project field notes, organize and label digital photographs, and organize and label digital video footage taken in the field. Saltonstall will also select up to 8 samples for radiocarbon dating and submit these samples and their accompanying documentation to Beta Analytic, a national carbon dating laboratory, for analysis.

A faunal analyst will be hired to complete an inventory of the animal remains collected from the site and develop a summary for the project's technical report. Molly Odell, born and raised in Kodiak and a graduate student at the University of Washington, is a likely candidate for this work.

When the collections work is complete, the Alutiiq Museum will develop a long-term loan agreement with the Old Harbor Native Corporation for the curation of the collections and their documentation. The museum will request that the faunal collections be donated to the Burke Museum in Seattle where they can be stored with faunal materials from other Kodiak Island excavations and near a cadre of researchers who wish to study such materials.

REPORTING

Project reporting will involve the creation of a technical report and an educational pamphlet.

Technical Report: Museum archaeologists Amy Steffian and Patrick Saltonstall will write the project's final technical report. This document will be organized in at least 7 chapters, introduced with a short project summary and acknowledgements that recognize all project contributors. The goals of the report will be to provide a detailed accounting of the work undertaken, address research questions, and summarize the prehistory of the Midway Peninsula. As research will be undertaken at three closely spaced sites, the project offers an unusual opportunity to consider changes in subsistence and settlement through time in one locale.

An introductory chapter will discuss the history of the project and its significance. A chapter summarizing the environmental, cultural, and historical setting of the three archaeological sites will follow. In addition to a brief summary of regional prehistory, this chapter will review current knowledge of Kodiak prehistory and identify the research questions associated with investigations at KOD-478, KOD-580, and KOD-1130. In chapter three, archaeologists will describe the Midway Bay peninsula and its archaeological sites, and share the methods of investigation – both field and laboratory – used in the study. In chapters 4 through 6, the researchers will provide a detailed summary of site finds. One chapter will focus on site stratigraphy and dating to provide a temporal context for the finds at each site as well as the broader settlement of the peninsula. The next chapter will discuss the features uncovered in the sites to illustrate architecture and site activities. This will be followed by a chapter with summaries of the artifact and faunal assemblages designed to provide a picture of site activities, seasonality of settlement, and use of raw materials. The report will end with a discussion of excavation results, revealing how finds shed light on the research questions asked at the beginning of the project and outlined herein. This will be followed by a list of the references cited in the text, and appendices that include a set of artifact and raw material descriptions.

Report graphics will include a detailed map for each site showing the locations of excavated areas in relation to surface features, as well as plan view drawings of features uncovered in excavation areas, and profile drawings of select stratigraphic sections from each excavation area. The report will provide photographs of all the significant features referenced in the text, as well as several general area photographs and images of work in progress that illustrate site locations and field methods. It will also include photographs of selected artifacts, presented in the text or as plates at the end of the manuscript. Tables will be used to summarize the

frequency and distribution of artifact types and raw materials, as well as the results of radiocarbon dating.

The report will be submitted to the Old Harbor Native Corporation for review, and then finalized at the Alutiiq Museum by addressing any comments returned. Five spiral bound copies of the final report will be submitted to the corporation, each with a DVD that includes electronic copies of major project documents – field notes, artifact catalogs, digital photographs, and digital video. The report will be due one year after the completion of fieldwork, ca. July 2014.

Educational Pamphlet: Following the completion of the report, Alutiiq Museum archaeologists will draft a two-sided, try fold pamphlet summarizing the results of the study. This full color publication will be written in non-technical language for a general audience and include photographs from the project. Text and photos will be formatted into an attractive design by Alutiiq graphic artists Alisha Drabek. After a review by the Old Harbor Native Corporation, 500 copies of the pamphlet will be professionally printed and provided to the corporation for distribution. The pamphlet will be completed within three months of the final project report, ca. October 2014.

Museum Promotion: Finally, the museum may also share project information with the public through an article in its quarterly newsletter, posts on its website and FaceBook pages, in public presentations or professional publications. These reporting activities will not be charged to the project contract, but conducted at the museum's discretion to share Alutiiq heritage.

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ALUTIIQ TRIBE OF OLD HARBOR

Resolution # 071614

A Resolution of the Alutiiq Tribe of Old Harbor outlining the protocol for managing the inadvertent discovery of human remains in association with the Old Harbor Airport Expansion project, to assist land owners, contractors, and professional archaeologists in effectively fulfilling the provisions of the Native American Graves Protection and Repatriation Act.

Whereas, the Native Village of Old Harbor, Alaska is a federally recognized tribe; and

Whereas, the Alutiiq Tribe of Old Harbor is the governing body for the Native Village of Old Harbor; and

Whereas, the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) mandates that the most closely culturally affiliated Native American group be notified when ancestral human remains are inadvertently discovered; and

Whereas, the Alutiiq Tribe of Old Harbor represents the closest culturally affiliated descendants of the Alutiiq people who one lived in the area of the Old Harbor Airport expansion project, an area with known archaeological sites; and

Whereas, construction activities and archaeological research planned in conjunction with the Old Harbor Airport expansion project have the potential to uncover ancestral Alutiiq human remains; and

Whereas, the Alutiiq Tribe of Old Harbor is a member of the Kodiak Alutiiq/Supiaq Repatriation Commission and has formally adopted the commission's provisions for the treatment of inadvertently discovered ancestral Alutiiq human remains; and

Whereas, the Alutiiq Tribe of Old Harbor wishes to complete NAGPRA related consultation regarding the inadvertent discovery of ancestral Alutiiq human remains before airport construction and archaeological salvage activities begin to insure swift and respectful treatment of such remain, and the efficient completion of an important community project;

New therefore be it resolved that, the Alutiiq Tribe of Old Harbor adopts the commission's procedures for the treatment of any ancestral Alutiiq human remains uncovered during the Old Harbor Airport expansion project. Specifically contractors and archaeologists involved in the project shall

A. Notify the Alaska State Troopers of the find so that a swift determination of its age and cultural affiliation can be made.

B. Whenever possible, involve an Alutiiq Museum archaeologist in the assessment of the find to prevent the unnecessary disturbance of prehistoric sites and graves, and to keep the remains from

being shipped off island to the medical examiner's office if it is not necessary.

Be it further resolved that, the Alutiiq Tribe of Old Harbor adopts these additional protocols for managing inadvertent discoveries of ancestral Alutiiq human remains for the Old Harbor Airport expansion project. Specifically contractors and archaeologists involved in the project shall

A. Notify the Old Harbor Native Tribal Council and the airport expansion project organizer, the Old Harbor Native Corporation, of the find as soon as possible, within 24 hours of discovery.

B. Whenever possible, work with an Alutiiq Museum archaeologist to document the provenience and contents of the remains and any associated funerary items to aid in their identification and remove them in their entirety from the construction area. This work will keep the remains of each identified individual together and insure that future earthwork will not damage or disturb the remains.

C. Provide the remains and any associated funerary items to the Alutiiq Tribe of Old Harbor for reburial at a place, at a time, and in a manner of the Council's choosing.

Passed this 21 day of September, 2012, at a duly convened meeting of the Alutiiq Tribe of Old Harbor.



Stella Krumrey, President



This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers
SITKA/IDAK STRAIT

A permit to: DISCHARGE UP TO 47,500 CY OF OVERBURDEN INTO 4.6109 ACRES OF WETLANDS.

at: SEC. 21 & 22, T. 34 S., R. 25 W., SM; USGS QUAD MAP KODIAK A-4; LAT. 57.2188° N., LONG. 153.2689° W.; AT THE OLD HARBOR AIRPORT, IN OLD HARBOR, AK.

has been issued to: OLD HARBOR TRIBAL COUNCIL

on: OCT 30 2012 and expires on: AUGUST 31, 2017

Address of Permittee: 2702 DENALI ST, STE. 100, ANCHORAGE, AK 99503

Permit Number:

POA-1986-95

FOR: *Shannon Morgan*
District Commander
Shannon Morgan
Team Lead, South Section
REGULATORY DIVISION



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
REGULATORY DIVISION
P.O. BOX 6898
JBER, ALASKA 99506-0898

OCT 30 2012

Regulatory Division
POA-1986-95

Old Harbor Tribal Council
Attention: Ms. Cynthia Berns-Lopez
2702 Denali Street, Suite 100
Anchorage, Alaska 99503

Dear Ms. Berns-Lopez:

Enclosed is the signed Department of the Army permit, file number POA-1986-95, Sitkalidak Strait, which authorizes the placement of overburden fill material into wetlands. The project site is located within Sections 21 and 22, T. 34 S., R. 25 W., Seward Meridian; USGS Quad Map Kodiak A-4; Latitude 57.2188° N., Longitude 153.2689° W.; at the Old Harbor airport, in Old Harbor, Alaska. Also enclosed is a Notice of Authorization which should be posted in a prominent location near the authorized work.

If changes to the plans or location of the work are necessary for any reason, plans must be submitted to us immediately. Federal law requires approval of any changes before construction begins.

Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Please contact me via email at roberta.k.budnik@usace.army.mil, by mail at the address above, by phone at (907) 753-2785, or toll free from within Alaska at (800) 478-2712, if you have questions.

Sincerely,

A handwritten signature in cursive script that reads "Roberta K. Budnik".

Roberta K. Budnik
Regulatory Specialist

Enclosures

DEPARTMENT OF THE ARMY PERMIT

Permittee: Old Harbor Tribal Council

Permit No.: POA-1986-95

Issuing Office: U.S. Army Engineer District, Alaska

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Discharge up to 47,500 cubic yards of organic overburden into a maximum of 4.6109 acres of wetlands.

All work will be performed in accordance with the attached plan, sheets 1-13, dated March 30, 2012.

Project Location: Sections 21 and 22, T. 34 S., R. 25 W., Seward Meridian; USGS Quad Map Kodiak A-4; Latitude 57.2188° N, Longitude 153.2689° W.; at the Old Harbor Airport, in Old Harbor, Alaska.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **August 31, 2017**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. Cut hillsides shall be stabilized immediately after construction to prevent erosion. Overburden discharged into wetlands shall also be stabilized immediately after construction to prevent erosion. Revegetation of the site shall begin as soon as site conditions allow and in the same growing season as the disturbance. Revegetation shall only be accomplished with plant species that are native to the area. Revegetated areas eventually shall have enough cover to sufficiently control erosion without silt fences, hay bales, or other mechanical means.

2. Effective erosion control structures (i.e., silt fences, straw bales, etc.) shall be installed and maintained before, during, and after construction to prevent erosion and the introduction of sediments and/or contaminants into adjacent waters of the U.S., including wetlands. These structures shall remain in place until all fills (including side slopes) or other disturbed areas subject to potential erosion have been permanently stabilized. Active sloughing, increased water turbidity, and sedimentation in drainage ditches, streams, sloughs, and/or adjacent wetlands shall be evidence of insufficient stabilization.

3. Project boundaries shall be clearly identified in the field (e.g., staking, flagging, silt fencing, etc.) prior to site clearing and construction to ensure avoidance of impacts of waters of the U.S., including wetlands, beyond the project footprint. In no case may disturbance extend beyond the identified fill footprint without prior approval from the Corps of Engineers.

4. Prior to beginning construction activities each day, all vehicles and equipment shall be inspected for any fluid leaks. If leaks are found, that equipment shall not be operated within wetlands until the leak is repaired. No vehicles or equipment shall be fueled, serviced, or stored within wetlands.

Special Information:

Any condition incorporated by reference into this permit by General Condition 5, remains a condition of this permit unless expressly modified or deleted, in writing, by the District Engineer or his authorized representative.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

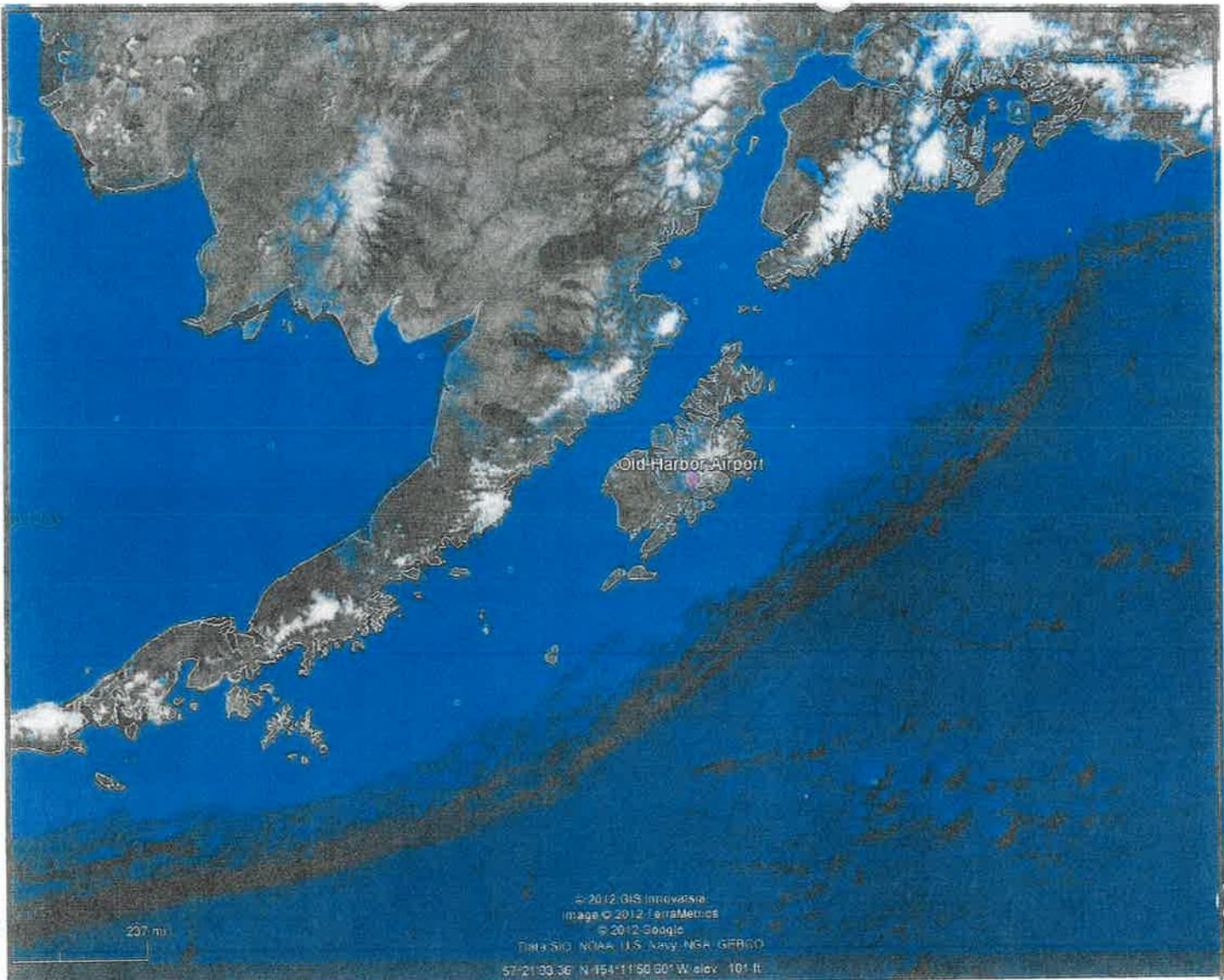
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.



Location of Old Harbor Airport

File No: POA-1986-95

WATERWAY: Sitkalidak Strait

PROPOSED ACTIVITY: Cut slopes on both sides of existing airport runway to meet

FAA 7:1 Transitional Surface

Sec. 21, T. 34S, R. 25W

Lat: 57° 13' 8.98\"N

Long: 153° 16' 5.95\"W

Sheet 1 of 13

Date: 03/30/21012