# PROPOSED PLAN

## SANAK ISLAND ARMY AIRCRAFT WARNING SERVICE STATION DISPOSAL SITE SANAK ISLAND, ALASKA

FORMERLY USED DEFENSE SITE (F10AK0204) – PROJECT 02

City Chambers
City of Sand Point Municipal Building
Sand Point, Alaska
28 February 2024
Call-in Number: (907) 308-3256
Phone Conference ID: 342 032 046#
Virtual Meeting Access:
http://tinyurl.com/bdz7yk7x

*Aerial of Sanak Island AWS Station Disposal Site, Connecting Road, and Pauloff Harbor*

# SAFETY MOMENT

The City Chamber Room is located on the second floor on the north side of the building.

**Emergency Exit**: Located in the Chamber Room that leads to the stairs

**Muster Area**: Parking Lot on south side of building

**Note:**

Bathroom Locations:
Two on First Floor & Two on Second Floor

# MEETING AGENDA

- Introductions
- Purpose
- Site Background & Characteristics
- Previous Investigations
- Extent of Contamination
- Summary of Site Risks
- Remedial Action Objective
- Remedial Alternatives
- Preferred Alternative
- Community Participation
- Questions and Comments

# KEY ROLES

- U.S. Army Corps of Engineers – Alaska District (USACE)
- Alaska Department of Environmental Conservation (ADEC)
- Paragon-Jacobs Joint Venture (PJJV)

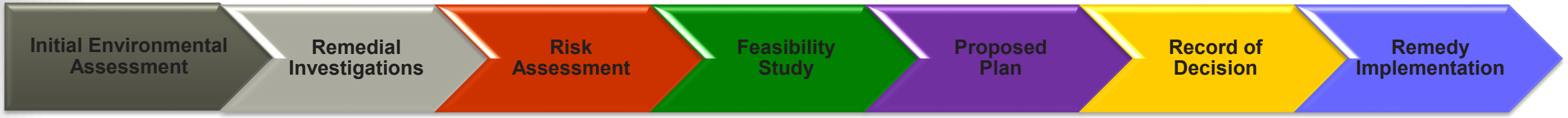
# PURPOSE

Present Proposed Plan and solicit input for removal and offsite disposal of polychlorinated biphenyl (PCB) contaminated soil at two features within the “Disposal Site” (DS01 and DS04) at the Sanak Island Army Aircraft Warning Service (AWS) Station Formerly Used Defense Sites (FUDS) Property, located on Sanak Island, Alaska.

The Sanak Island AWS Station is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site. USACE issued the Proposed Plan as part of its public participation responsibilities under Section 117(a) of CERCLA, known as Superfund [42 U.S.C. § 9601 et al.], and in accordance with:

- National Oil and Hazardous Substances Pollution Contingency Plan
- USACE Engineer Regulation 200-3-1
- Defense Environmental Restoration Program (DERP) and FUDS Program Policy
- U.S. Environmental Protection Agency Guidance

# PURPOSE




- **CERCLA** was enacted by Congress on December 11, 1980.
- This law provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment.
- USACE is the lead agency under CERCLA and follows the CERCLA process.
- PCBs are considered a hazardous substance under CERCLA. PCB contamination is present at the Disposal Site at the Sanak Island AWS Station FUDS at concentrations that pose potential risk to human health or the environment.
- CERCLA remediation follows a standard process.

# PROPOSED PLAN PURPOSE

The purpose of the Proposed Plan is to describe the:

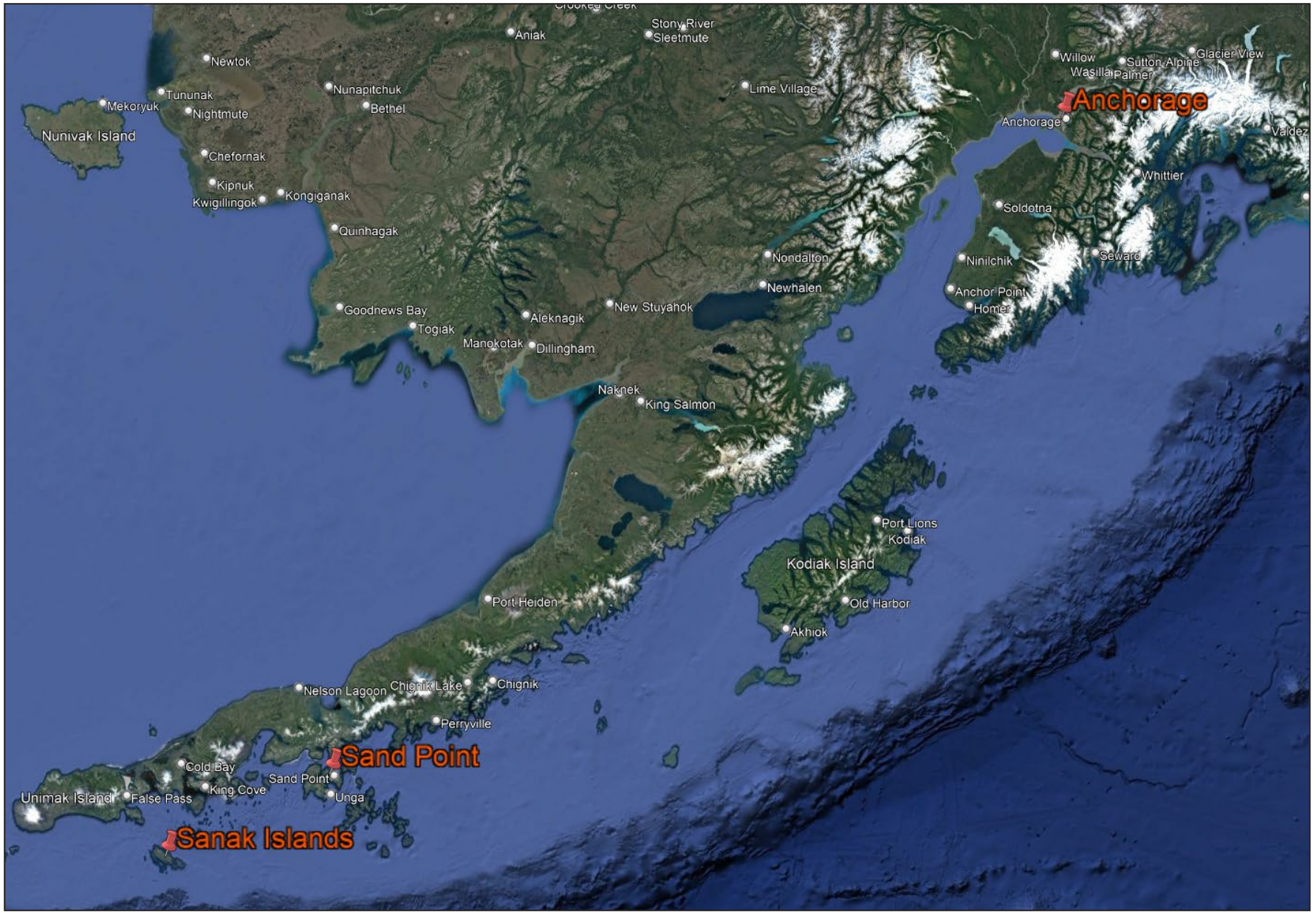
- Environmental conditions and site risks;
- Proposed cleanup criteria;
- Previous investigations and debris/soil removal;
- Remedial alternatives considered and comparative evaluations;
- Preferred remediation alternative; and to
- Request public comment on the remedial alternatives and provide information on how the public can be involved in the final decision.

# SITE BACKGROUND & CHARACTERISTICS

## SITE VICINITY

The Sanak Islands are approximately:

- 660 miles southwest of Anchorage
- 100 miles southwest of Sand Point



# SITE BACKGROUND & CHARACTERISTICS

## SITE LOCATION

The Sanak Island AWS Station is on the north side of Sanak Island, the largest of the Sanak Islands.

The Disposal Site is located east of the Sanak Island AWS Station, northwest of Pauloff Harbor.

# EARLY HISTORY OF SANAK ISLAND

Sanak Island has been inhabited by Unangax̂ people for at least 7,000 years, participating in an extensive Indigenous trade network.

**1766** – Sanak Island first mentioned in a written report by Russians (Stepan Glotov)

**1771** – First known meeting between Sanak Unangax̂ and Russians (Ivan Solov'ev)

**1792** – Billings-Sarychev Expedition took a census of *Kasiq* village

**1796** – Hieromonk Makarii baptized 106 adults in *Kasiq* village

**1808** – Russian American Company established an outpost

**1823** – The Russian American Company moved all Sanak Unangax̂ to Belkofski

**1873** – Alaska Commercial Company built a trading post in Sanak Harbor

**1886** – McCollam Fishing & Trading Company built a codfish station in Pavlof Harbor

**1889** – Lynde & Hough built a codfish station in Sanak Harbor

*Union Fish Company's Pavlof Station, Pauloff Harbor, 1916*

*Sanak Harbor (Company Harbor), 1913*

# WWII HISTORY AND CURRENT USES

**June 1943** – Construction of the Sanak Island AWS Station is completed, and the SCR-271 Radar is operational.

**Late 1945** – Sanak Island AWS Station is decommissioned.

**1946** – Tsunami damages Sanak Village

**1949** – U.S. Post Office established in Pauloff Harbor

**1953** – U.S. Post Office in Sanak Village is closed; no year-round residents remain

**1980** – The last year-round residents leave Sanak Island

*Sanak Island Army AWS Station circa 1943*

Current Landownership Status:

- Sanak Corporation – surface landowner
- The Aleut Corporation – subsurface landowner

Current & Future Use:

- Currently Uninhabited
- Subsistence, cultural, and recreational activities
- Potential economic/residential development

*Sanak Island feral cattle and horses*

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# PREVIOUS INVESTIGATIONS: DISPOSAL SITE


- **2002 & 2004 Site Reconnaissance:** Six disturbed areas were identified at a potential military dump site that appeared to be part of a larger dump complex. Future sampling was recommended. This area is now what is known as the Disposal Site (DS).

- **2006 Battery Cleanup and Soil Sampling:** Soil samples collected from the Disposal Site indicated PCBs, diesel and lead were above screening levels at DS01.

- **2009 Surface Water Sampling:** One sample collected from Charlie Conners Lake (250 feet northwest of the Disposal Site). No contamination was identified.

- **2010 Step II and Step III Site Investigation:** Three soil samples collected at the Disposal Site; each sample exceeded arsenic screening levels and one exceeded screening levels for PCBs and diesel. Two surface water samples were collected at Charlie Conners Lake. No surface water contamination was identified.

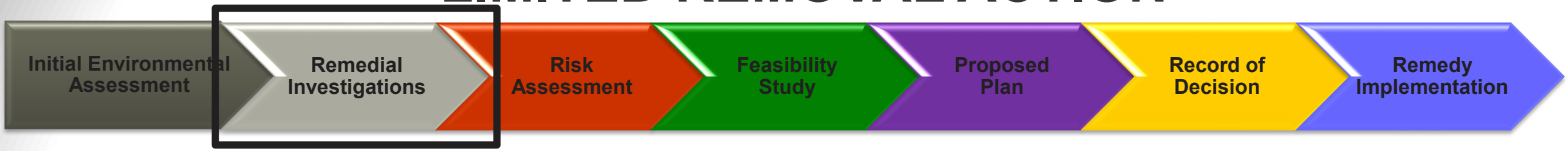
# 2012 USACE SITE INVESTIGATION

- 12 features were identified at the DS (DS01 through DS12) and evaluated for subsurface debris using geophysical methods.
- 8 features warranted further investigation, including DS01, an earthen pit with electrical equipment, a partial drum, pieces of a potential transformer and other debris, and DS06, which had partially buried drums. Other items found included a drum carcass, rusted metal remnants, and broken glass bottles.
- 6 surface soil samples were collected; 3 samples from DS01 exceeded screening levels for total chromium, PCBs, and diesel range organics (DRO).
- 3 surface water samples were collected from Charlie Connors Lake. No contamination was identified.
- No contamination was identified at the remaining 4 features (DS05, DS07, DS11 and DS12).

*DS01: Earthen pit, exposed soil, chemical odor*

*DS04: Mounded pit with bare soil, rusted metal, glass bottle*

# 2014 USACE REMEDIAL INVESTIGATION & LIMITED REMOVAL ACTION




- Further investigation at 8 features (DS01, DS02, DS03, DS04, DS06, DS08, DS09, DS10).
- 6 monitoring wells sampled; no contamination identified.
- Electrical equipment and drum remnants removed from DS01. Drum remnants removed from DS02 and DS06.
- Field screening and confirmation sampling performed to characterize and delineate remaining contamination.

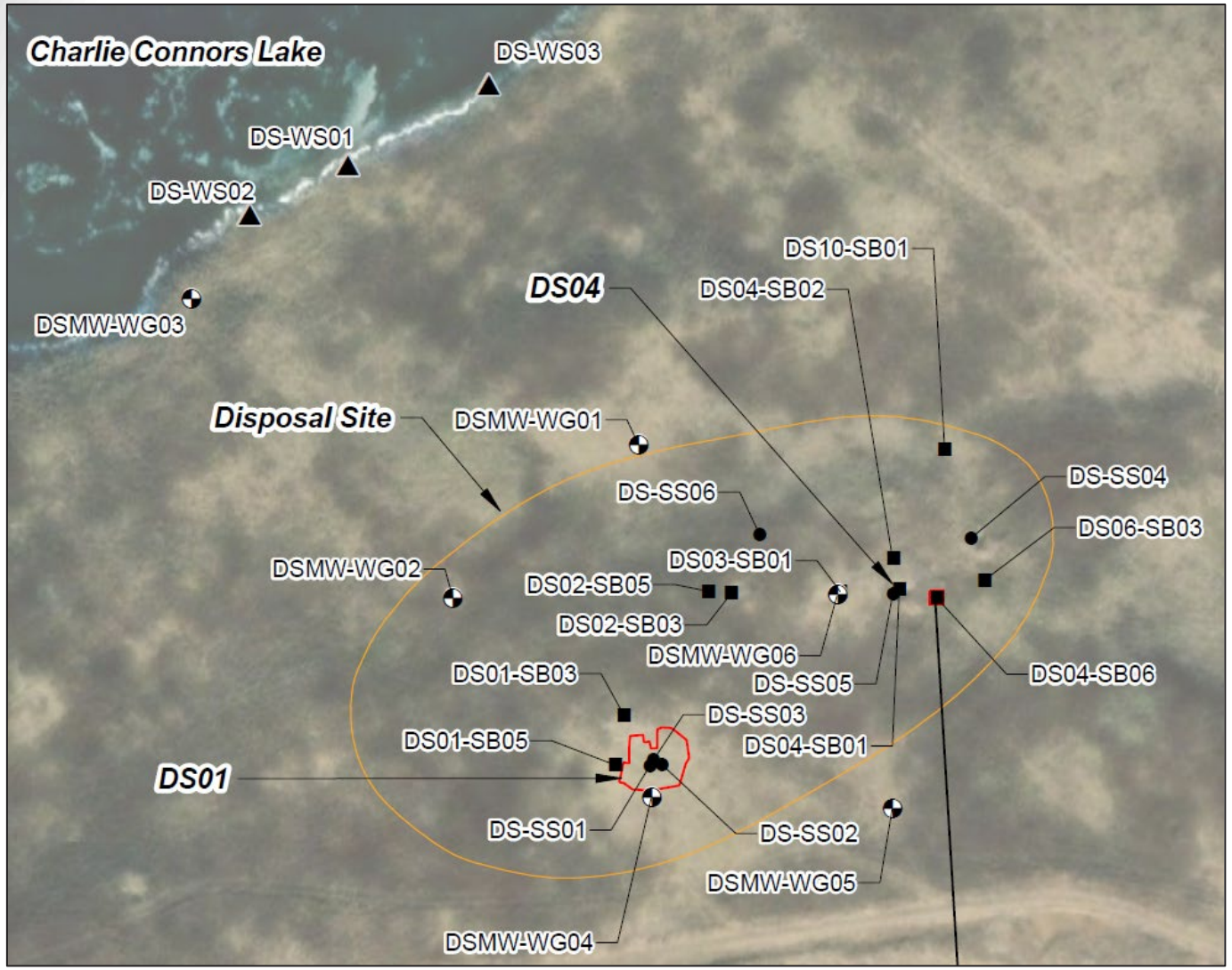
*DS01: Surface soil grid to delineate impacts*

*DS01: Excavation of PCB-contaminated soil*

**DS01:** 73 tons of PCB-impacted and 1.5 tons of lead-impacted soil removed; PCBs remain with max concentration of 87 ppm.

**DS04:** Three sample locations analyzed; PCBs exceeded screening level at one location at 1.3 ppm.

# ESTIMATED EXTENT OF CONTAMINATION AT DISPOSAL SITE




*Soil sampling of a debris pile using direct push drill technology*

- Surface Soil Sample
- Surface Water Sample
- Monitoring Well
- Subsurface Soil Sample
- Estimated Extent of Contaminated Soil Remaining
- Disposal Site

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# EXTENT OF CONTAMINATION

## DS01

**DS01 Estimated Extent of Contaminated Soil**
**Area = 1700 square feet**
**In Situ Volume = 605 cubic yards**
**Ex Situ Volume = 760 cubic yards**

Estimated Extent of PCB contaminated soil above 1 part per million.

Area 1 proposed excavation extent to a depth of 10 ft and extended to the south by 10 ft under Alternatives 2 and 3. Composite confirmation floor samples collected in 2014 showed PCBs at 7.3 mg/kg and 4.8 mg/kg. A composite sidewall sample on the southern end showed PCBs at 87 mg/kg.

Area 2 proposed excavation extent to a depth of 10 ft under Alternatives 2 and 3. A composite confirmation floor sample in 2014 showed PCBs at 1.3 mg/kg.

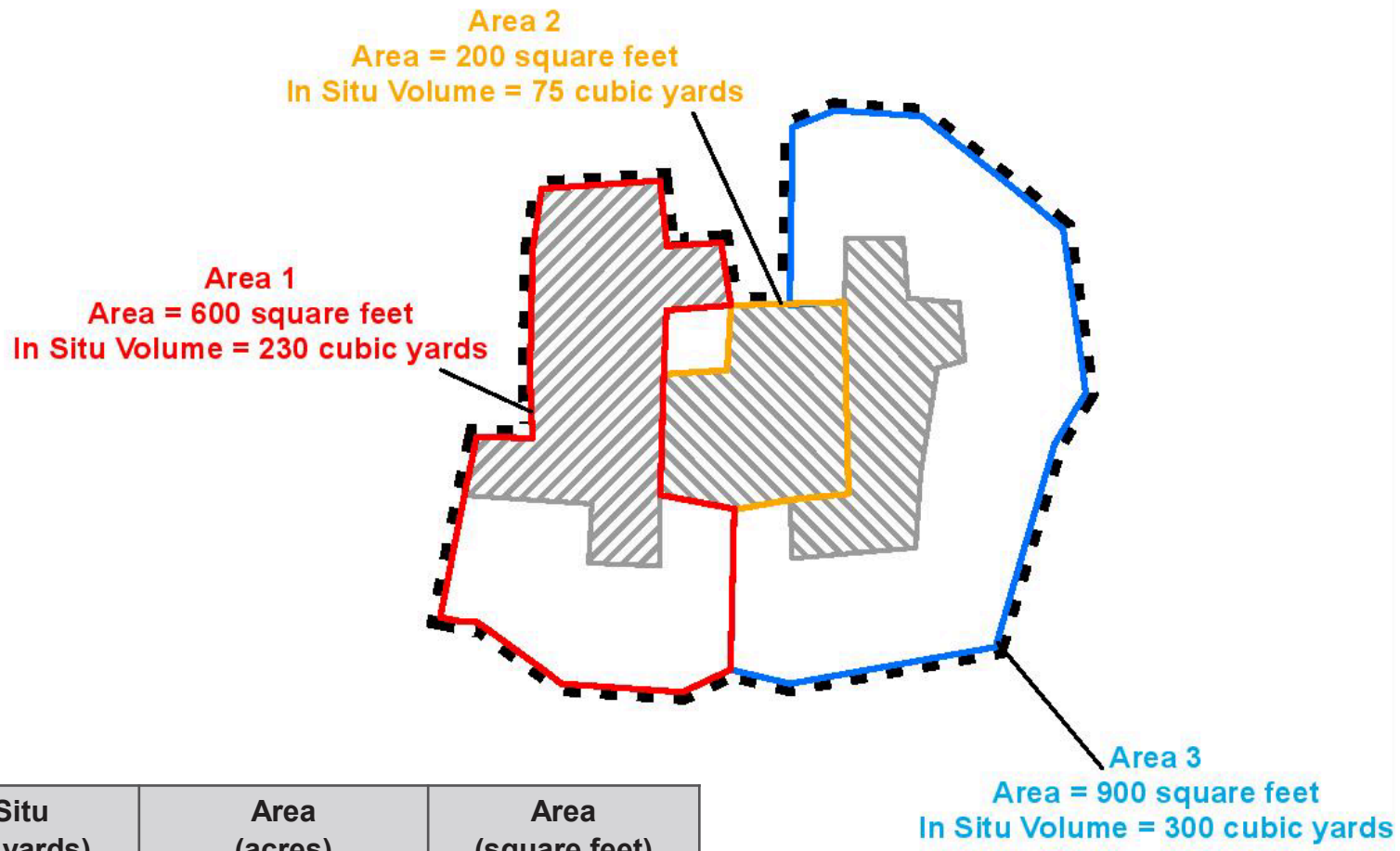
Area 3 proposed excavation extent to a depth of 10 ft and out 10 ft on the northern, eastern and southern sides under Alternatives 2 and 3. Composite northern, eastern and southern confirmation sidewall samples in 2014 showed PCBs at 1.7 mg/kg and 87 mg/kg.

**Previous Excavation Depths**

2 feet

6 feet

mg/kg = milligrams per kilogram
ft = feet

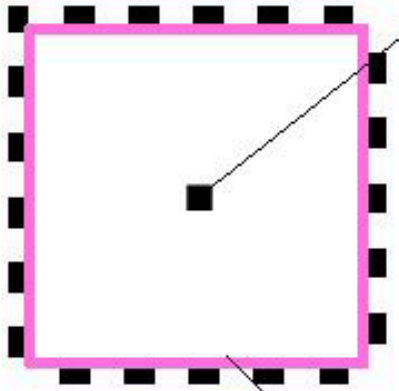



| Site | In Situ (cubic yards) | Ex Situ (cubic yards) | Area (acres) | Area (square feet) |
|---|---|---|---|---|
| **DS01** | 605 | 760 | 0.04 | 1,700 |

# EXTENT OF CONTAMINATION

## DS04

- PCB sample location with PCBs above 1 ppm
- Estimated Extent of PCB contaminated soil above 1 part per million.
- Area 1 proposed excavation extent to a depth of 12 ft under Alternatives 2 and 3.



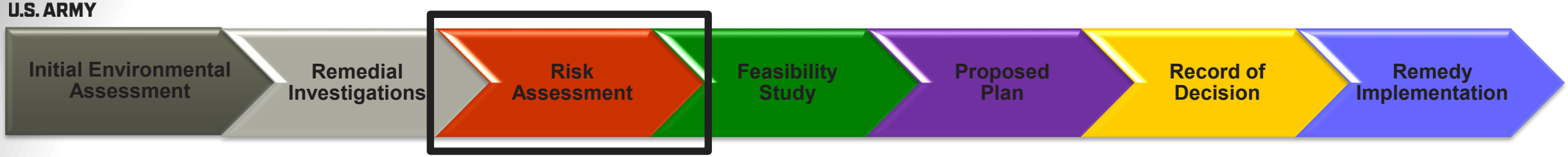
DS04-SB06
DS04-SB06-0910-0607
6/7/2014
PCBs: 1.3 ppm
9-10 ft. bgs.

SB = soil boring
ft = feet
bgs = below ground surface

Area 1
Area = 100 square feet
In Situ Volume = 45 cubic yards
Ex Situ Volume = 60 cubic yards

| Site | In Situ (cubic yards) | Ex Situ (cubic yards) | Area (acres) | Area (square feet) |
|---|---|---|---|---|
| DS04 | 45 | 60 | 0.002 | 100 |

# SUMMARY OF RISK EVALUATION




## POTENTIAL SITE RISKS

- Arsenic, total chromium, lead, PCBs, DRO, and heptachlor epoxide (pesticide) were assessed in soil.
- Hexavalent chromium was assessed in groundwater.

## EVALUATION

- Following the 2014 limited removal action, the maximum detected concentrations of lead, diesel, and heptachlor epoxide in soil were below human health screening values.
- Arsenic and total chromium occur naturally in soil.
- There is no known source of hexavalent chromium.
- No unacceptable risk to ecological receptors

## CONFIRMED SITE RISKS

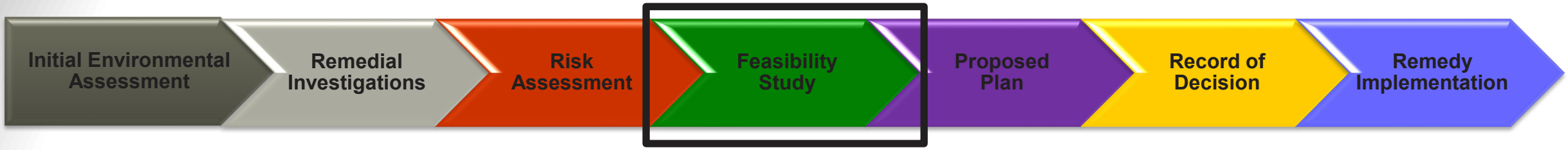
PCBs in soil at DS01 and DS04 are only contaminants with unacceptable risk to future residents and construction workers.

# REMEDIAL ACTION OBJECTIVE

Remedial Action Objective (RAO) for DS01 and DS04 based on the Toxic Substances Control Act:

***Prevent residents and construction workers from direct contact with and ingestion or inhalation of surface and subsurface soil containing PCBs above 1 ppm.***

# REMEDIAL ALTERNATIVES




## 2022 Feasibility Study purpose:

- Assess site conditions
- Evaluate remedial alternatives
- Evaluate potential Applicable and Relevant or Appropriate Requirements (ARARs)

## Technologies were initially screened based on:

- Site-Specific Effectiveness
- Implementability
- Cost

# REMEDIAL ALTERNATIVES

Retained remedial alternatives are screened against nine criteria per the National Contingency Plan [40 CFR § 300.430(e)(9)]:

*Threshold Criteria*

1. Overall Protection of Human Health and the Environment
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

*Balancing Criteria*

3. Long Term Effectiveness and Permanence
4. Reduction of Toxicity, Mobility, or Volume through Treatment
5. Short-Term Effectiveness
6. Implementability
7. Cost

*Modifying Criteria (based on stakeholder input on the Proposed Plan)*

8. State Acceptance
9. Community Acceptance

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# REMEDIAL ALTERNATIVES

## ALTERNATIVE 1 – NO ACTION

- No activities would be undertaken to treat or remove the PCB contamination or to prevent the exposure of site users to PCBs.
- PCB concentrations are not expected to decrease at a rate that would allow the RAO to be achieved in a reasonable timeframe.
- No monitoring, no cost, and RAO is not achieved.
- This alternative is required to serve as a baseline.

## ALTERNATIVE 2 – EX SITU ONSITE THERMAL TREATMENT

- Soil with PCB concentrations above 1 ppm (approximately 650 cubic yards) excavated and thermally treated.
- Two technologies were considered:
  - Alternative 2a – Ex Situ Treatment via Semi-Continuous Thermal Desorption
  - Alternative 2b – Ex Situ Treatment via In-Pile Thermal Desorption
- Following excavation, collect confirmation samples to ensure the RAO is met. Treated soil is then used as backfill.
- Would not require on- or off-site disposal of soil, but residual waste streams would need to be managed and disposed.
- No land-use controls or five-year reviews, as the RAO would be attained at project completion.

## ALTERNATIVE 3 – REMOVAL AND OFFSITE DISPOSAL

- Excavate and dispose of soil with PCB concentrations above 1 ppm (approx. 650 cubic yards).
- Barge equipment and heavy machinery to the site.
- Confirmation sampling to ensure the RAO is met.
- No land-use controls or five-year reviews.

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# REMEDIAL ALTERNATIVES: THRESHOLD CRITERIA

1. **Overall Protection of Human Health and the Environment**
2. **Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) –** ARARs are federal environmental or state environmental or facility siting laws and regulations that are identified when evaluating CERCLA removal or remedial actions.

| ARAR | Regulation | Description |
|---|---|---|
| Toxic Substances Control Act | **40 Code of Federal Regulations (CFR) § 761.61(a)(4)(i)(A)** The cleanup level of non-liquid PCB remediation in soil, sediments, dredged materials, muds, PCB sewage sludge, and industrial sludge in high occupancy areas is [</=] 1 ppm without further conditions. | Establishes a cleanup level for high occupancy areas of 1 ppm. |
| Oil and Hazardous Substances Pollution Control Regulations | **18 Alaska Administrative Code (AAC) § 75.340(j)(2)** Soil cleanup levels based on human exposure from ingestion of or dermal contact with soil, or inhalation of particulates or a volatile hazardous substance, must be attained in the surface soil and the subsurface soil to a depth of 15 feet, unless an institutional control or site conditions prevent human exposure to the subsurface soil | Promulgated and substantive, specifies a control standard, and is applicable to the remedial action on site. |

| Criterion | Alternative 1 No Action | Alternative 2a Ex Situ Thermal Desorption – Semi-Continuous Treatment | Alternative 2b Ex Situ Thermal Desorption – In-Pile Treatment | Alternative 3 Removal and Offsite Disposal |
|---|---|---|---|---|
| **Overall Protection of Human Health and the Environment** | Fail | Pass | Pass | Pass |
| **Compliance with ARARs** | Fail | Pass | Pass | Pass |

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# REMEDIAL ALTERNATIVES: BALANCING CRITERIA

| Criterion | **Alternative 1** No Action | **Alternative 2a** Ex Situ Thermal Desorption – Semi-Continuous Treatment | **Alternative 2b** Ex Situ Thermal Desorption – In-Pile Treatment | **Alternative 3** Removal and Offsite Disposal |
|---|---|---|---|---|
| **Long-Term Effectiveness and Permanence** | None | Very High | Very High | Very High |
| **Reduction in Toxicity, Mobility, or Volume through Treatment** | None | High | High | None |
| **Short-Term Effectiveness** | None | Moderate | Low | Low |
| **Implementability** | Partial | Low | Moderate | Moderate |
| **Cost** | **$0** | **$2.07M** | **$3.23M** | **$1.73M** |

# REMEDIAL ALTERNATIVES: BALANCING CRITERIA

3. **Long Term Effectiveness and Permanence** – Evaluates the ability of alternatives to maintain protection of human health and the environment after response objectives have been met, the magnitude of residual risks remaining at the conclusion of the remedial action, and the adequacy and reliability of any controls used.
   - This was rated ***very high*** for all action alternatives.

4. **Reduce Toxicity, Mobility, or Volume (TMV) through Treatment** – Evaluates performance of treatment methods to completely and permanently destroy contaminants. CERCLA Section 9621 (Cleanup Standards) states remedial action treatments that permanently and significantly reduce the TMV of contaminants are preferred over other remedial actions.
   - Alternatives 1 (No Action) and 3 (Removal and Offsite Disposal) do not satisfy the preference for treatment. No treatment would occur.
   - Alternatives 2a (Semi-Continuous Thermal Desorption) and 2b (In-Pile Thermal Desorption) include onsite treatment options to reduce the concentration to below 1 ppm. ***Rating: high***

# REMEDIAL ALTERNATIVES: BALANCING CRITERIA (CONTINUED)

5. **Short-Term Effectiveness** – Examines short-term impacts during construction and implementation, and effectiveness and reliability of protective measures. This includes community health, worker safety, and environmental quality as well as time required until the RAO is achieved.
    - Alternative 1 (No Action): No short-term effectiveness or risk reduction. No remedial action would occur. PCBs would remain at site at current concentrations.
    - Alternative 2a (Semi-Continuous Thermal Desorption): 30 day duration. Equipment is self-contained, mobile and modular. Soil is fed by conveyor belt into heated steam chamber. Treated soil is stockpiled. ***Rating: moderate***
    - Alternative 2b (In-Pile Thermal Desorption): 90 day duration. Soils are treated in a stockpile, using horizontally imbedded electric powered units with vapor captured and treated. Commercially available through multiple vendors. ***Rating: low***
    - Alternative 3 (Removal and Offsite Disposal): 10 day duration to excavate soil plus offsite transport time to the Lower 48 states. ***Rating: low***

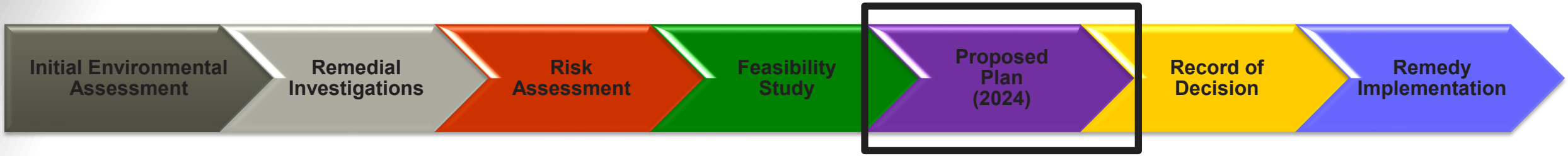
# REMEDIAL ALTERNATIVES: BALANCING CRITERIA (CONTINUED)



6. **Implementability** – Weighs technical and administrative feasibility, availability of supplies/equipment and services, and reliability.
   - Alternative 1 (No Action): Very easy to implement; however, it does not satisfy the Threshold Criteria as no action would be taken.
   - Alternatives 2a (Semi-Continuous Thermal Desorption): Complexity in mobilization, construction, operation, and maintenance of system. Requires specialized equipment with low commercial interest. ***Rating: low***
   - Alternative 2b (In-Pile Thermal Desorption): Complexity in mobilization, construction, operation, and maintenance of system. ***Rating: moderate***
   - Alternative 3 (Removal and Offsite Disposal): Commonly implemented successfully but the soil must be transported to the Lower 48 for disposal. ***Rating: moderate***

7. **Cost** - Considers the capital and operation and maintenance (O&M) costs of each alternative. Capital costs include costs during remedy implementation such as for equipment, materials, construction-related labor, and site development. O&M are post-construction costs incurred once a remedy is in place to ensure continued effectiveness.

# PROPOSED PLAN




## MODIFYING CRITERIA

8. State Acceptance
9. Community Acceptance

- The lead agency (USACE) identifies a preferred alternative and presents it to stakeholders in the Proposed Plan for review and comment.
- USACE obtains input regarding the preferred alternative.
- USACE considers all comments and determines if the preferred alternative remains the most appropriate.

# PREFERRED ALTERNATIVE

## ALTERNATIVE 3: REMOVAL AND OFFSITE DISPOSAL

- Quickly achieves RAO through permanent removal of PCB-contaminated material greater than 1 ppm
- Minimal uncertainty during construction and operation
- Technical problems leading to costly delays are unlikely
- Low risk of untreated and residual (incompletely treated) contaminated material remaining onsite
- No long-term monitoring requirements
- Reduced coordination needs and delays
- Readily available resources
- Remedial technology is readily available
- Lowest cost
- Expected to satisfy CERCLA statutory requirements

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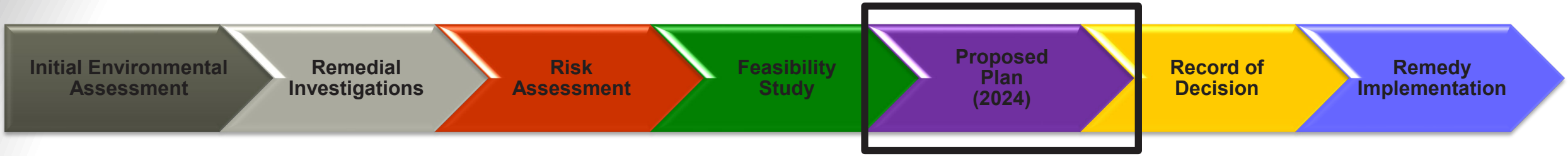
# COMMUNITY PARTICIPATION




A **Proposed Plan** has been issued by USACE as the lead agency to clean up PCB-contaminated soil at the Sanak Aircraft Warning Service Station Disposal Site. The plan presents ***Removal and Offsite Disposal*** as the Preferred Alternative. USACE is soliciting input and encourages the public **(YOU)** to comment.

Please provide feedback today verbally or by using the comment card, or by commenting via phone, email, or letter.

**The Proposed Plan can be found at:**

- https://www.poa.usace.army.mil/Library/Reports-and-Studies under Environmental Cleanup
- Information Repository - **Room 7 & 8 of the Pauloff Harbor Tribal Office, Sand Point, AK**
- USACE Alaska District Office - **2204 Talley Avenue, Joint Base Elmendorf-Richardson, AK**

**Comments will be considered in a final decision to be formalized in a Record of Decision. Changes to the proposed approach may be made through this comment review process.**

# QUESTIONS & COMMENTS

*Boat off Pauloff Harbor*

# PUBLIC COMMENT PERIOD

## *February 22, 2024 – March 25, 2024*

**Submit Comments by:**

**Phone:** 1 (888) 446-5066

**Mail:** USACE Alaska District
ATTN: CEPOA-PM-ESP-FUDS (Astley)
P.O. Box 6898
JBER, AK 99506-0898

**Email:** POA-FUDS@usace.army.mil

**Comments must be received (or postmarked) by March 25, 2024.**