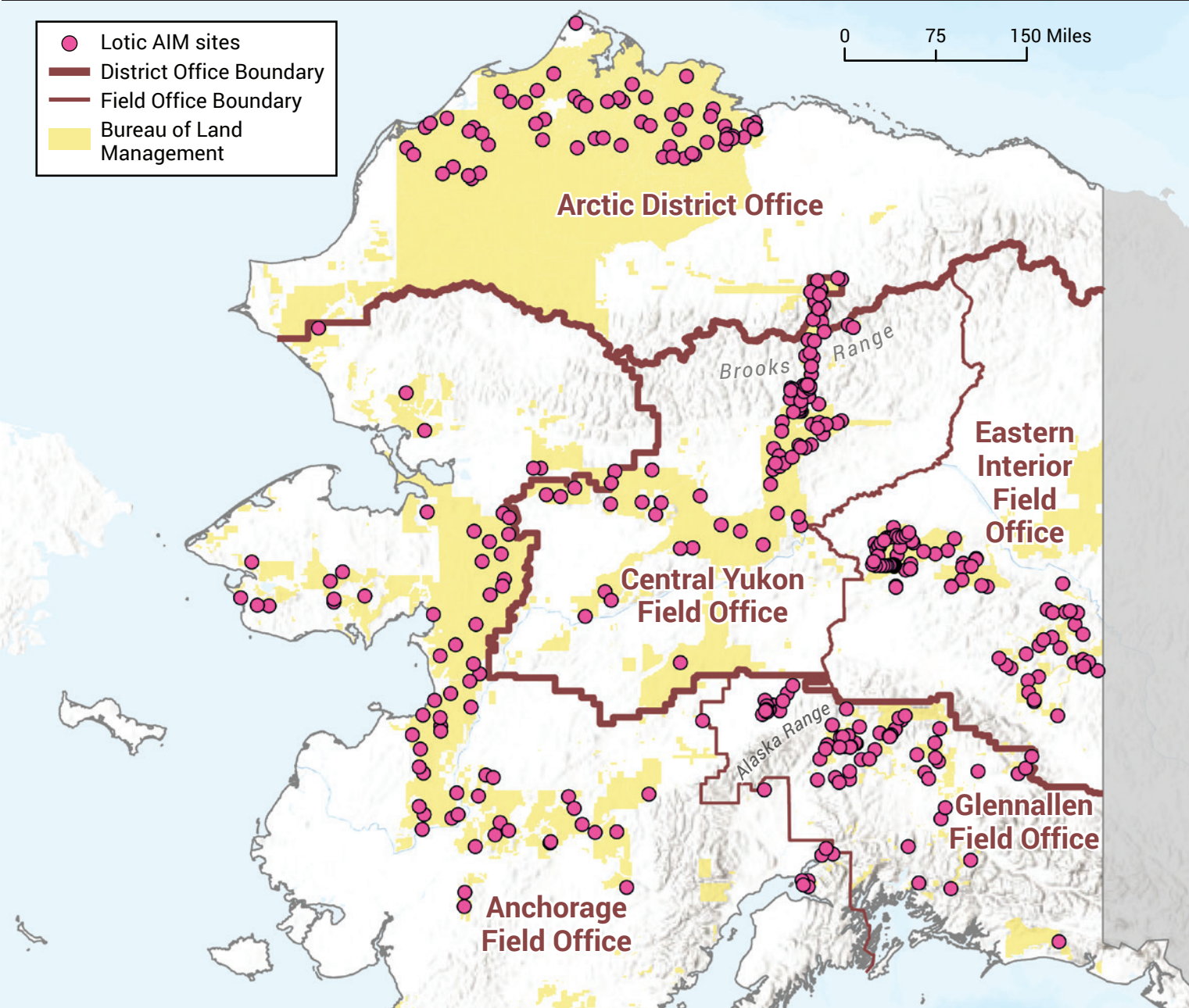


Existing AIM Stream Assessment Sites

- Lotic AIM sites
- District Office Boundary
- Field Office Boundary
- Bureau of Land Management

0 75 150 Miles



CONTACT INFORMATION

Fisheries Resources Lead
Matthew Varner
mvarner@blm.gov

Aquatic Resource Analyst
Christopher Clark
clclark@blm.gov

Learn more about AIM at:
<https://www.blm.gov/aim>

View and access AIM data at:
<https://gbp-blm-egis.hub.arcgis.com/pages/aim>
All photos courtesy of the Bureau of Land Management



U.S. Department of the Interior
Bureau of Land Management

BLM's Assessment, Inventory, and Monitoring Strategy

Understanding the Condition of Stream Habitats in Alaska



The objective of the Assessment, Inventory, and Monitoring (AIM) Strategy is to provide a standardized approach for measuring natural resource condition and trend on Bureau of Land Management (BLM) public lands. The AIM Strategy provides quantitative data and tools to guide and justify policy actions, land uses, and adaptive management decisions.



AIM benefits...

- ▶ Structured implementation to guide monitoring program development, implementation and management decisions.
- ▶ Standardized field methods to allow data comparisons across landscapes and in collaboration with BLM partners.
- ▶ Appropriate sample designs to minimize bias and maximize what can be learned from collected data.
- ▶ Data management and stewardship to ensure data quality, accessibility, and use.

EVIDENCE-BASED DECISIONS USING STANDARD WORKFLOWS

- ▶ Land health standard evaluations to inform authorizations of permitted uses.
- ▶ Invasive species tracking and management.
- ▶ Restoration, reclamation, and mitigation treatment effectiveness.
- ▶ Habitat condition assessment and monitoring for species of management concern.
- ▶ Land use planning and evaluation.
- ▶ Affected environment and alternatives analyses for proposed actions (e.g., the NEPA process).
- ▶ Performance measures reporting for the Department of the Interior Strategic Plan.

STRUCTURED IMPLEMENTATION

AIM monitoring starts with identifying clear management questions to inform when, where, and how often data are collected. This and all other steps of AIM are supported by a network of aquatic resource monitoring experts. Collectively, the BLM team provides practitioners support with:

- ▶ Monitoring plan development.
- ▶ Identification and implementation of appropriate sample designs.
- ▶ Field methods training.
- ▶ Data collection, storage, and access solutions.
- ▶ Data quality assurance and control procedures.
- ▶ Analysis and reporting tools and support.

STANDARDIZED FIELD METHODS

AIM field methods for stream habitat assessments were developed by a network of BLM experts and partners to ensure usable and repeatable data for the BLM, while also standardizing monitoring efforts across agencies and jurisdictions throughout the coterminous U.S. and Alaska.



Lotic methods: Designed to provide quantitative data for wadeable streams and rivers.

- ▶ **Example indicators derived from field methods:** Conductivity, temperature, bank stability and cover, floodplain connectivity, and macroinvertebrate biological integrity.
- ▶ **Protocol:** "AIM National Aquatic Monitoring Framework: Field Protocol for Wadeable Lotic Systems," Technical Reference 1735-2 (2021)

INTEGRATION OF SUPPLEMENTAL METHODS

AIM field methods are not limited to the BLM protocol. To address unique or specific management questions, it is often necessary to collect additional data using supplemental methods. During the development of regional monitoring programs it is important to consider key management questions and the types of additional data that might be needed to address them.

Common types of supplemental data collected in Alaska:

- ▶ **Surveyed cross sections:** Contributes to the development of regionally specific stream restoration design datasets.
- ▶ **Environmental DNA:** Useful for early detection of aquatic invasive species and/or priority fish species presence/absence.



APPROPRIATE SAMPLE DESIGNS

The BLM uses the AIM Strategy to inform management decisions at multiple spatial scales, from individual restoration projects to national-level reporting. The AIM team provides technical support for the development of appropriate sample designs (Figure 1) to match monitoring objectives from targeted sampling to spatially balanced, random sampling.

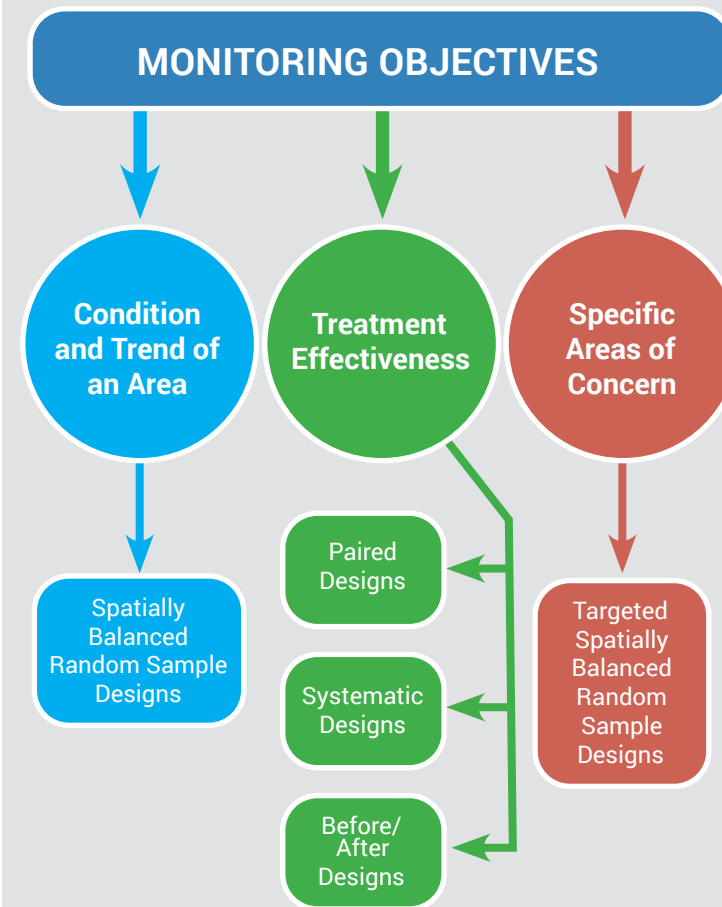
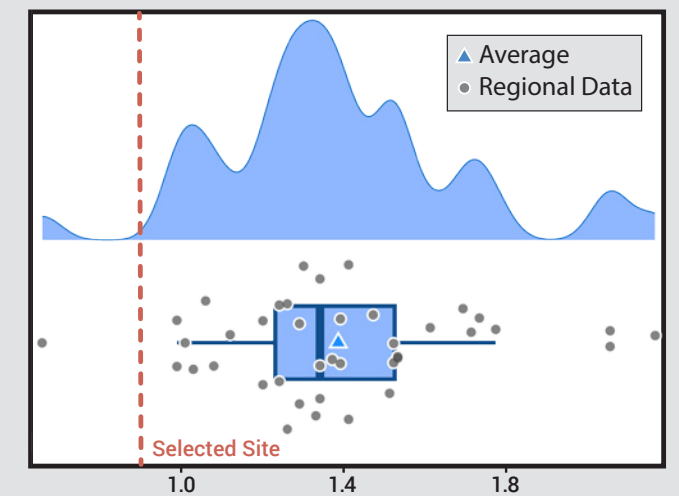


Figure 1. Examples of different AIM sample designs. Monitoring objectives define which design(s) is appropriate for a specific resource, area, or management question.

DATA MANAGEMENT AND STEWARDSHIP

AIM data are collected using mobile applications and stored in a centralized BLM repository that is available to users via web portals and spatial data services. Mobile applications allow for greater integration of data quality assurance and control practices while also making data available sooner. Centralized data storage gives users the ability to analyze AIM data independently or with BLM developed tools.



DATA EXPLORATION TOOLS

The BLM is continuing to develop simple tools to make exploring data much easier and intuitive for stakeholders with diverse backgrounds. These tools provide numerous benefits:

- ▶ Rapid data visualization.
- ▶ Treatment Effectiveness Analysis.
- ▶ Automated analysis plots and summary statistics.
- ▶ Simple, efficient and accessible data exploration tools.